

Model Tuning

June 1, 2022

```
[1]: import numpy as np
import h5py
import torch
from torch.utils.data import Dataset, DataLoader
import torch.nn as nn
from collections.abc import Iterable
import time
import math

batchSize = 32 #Batch size of training set

[2]: def trainNetwork(model, loss_function, optimizer, numEpochs, dataloader,
    ↪ numOutputs):

    #Set model to training mode
    model.train()

    for epoch in range(numEpochs):

        # Print epoch
        print(f'Starting epoch {epoch+1}')

        # Set current loss value
        current_loss = 0.0

        #Reset model parameters

        # Iterate over the DataLoader for training data
        for i, data in enumerate(dataloader, 0):

            # Get and prepare input

            preProcessedInputs = data[:, 0:4] #This line doesn't really do
            ↪ anything, delete later?
            targets = data[:, 4:(4+numOutputs)]

            #Process intensity by putting it on a log scale
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intens = data[:, 0:1]
intens = np.log(intens)
inputs = torch.cat((intens, data[:,1:4]), axis = 1)

#Process targets by putting them on a log scale
targets = np.log(targets)

#print(type(inputs))

#Comment the next two lines out if not using GPU
inputs = inputs.to('cuda')
targets = targets.to('cuda')

#Normalize inputs
inputs, targets = inputs.float(), targets.float()
targets = targets.reshape((targets.shape[0], numOutputs))

# Zero the gradients
optimizer.zero_grad()

# Perform forward pass
inputs = inputs
outputs = model(inputs)

#The following two lines are for debugging only
#     if i % 10 == 0:
#         print("Targets:", targets[0:2])
#         print("Outputs:", outputs[0:2])
#         print()
#         print()

# Compute loss
loss = loss_function(outputs, targets)

# Perform backwards propagation
loss.backward()

# Perform optimization
optimizer.step()

# Print statistics
current_loss += loss.item()
if i % 10 == 0:
    print('Loss after mini-batch %5d: %.3f' %
          (i + 1, current_loss / 500))
    current_loss = 0.0

```

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# Process is complete.
print('Training process has finished.\n')
```

```
[3]: def calc_MSE_Error(target, output, index):

    targetNP = np.exp(target[:, index].cpu().detach().numpy())
    outputNP = np.exp(output[:, index].cpu().detach().numpy())

    # print(targetNP)
    # print(outputNP)

    result = np.square(np.subtract(targetNP, outputNP)).mean()

    # print("Index: ", index)
    # print(target)
    # print(output)

    print("Result:", result)

    return result
```

```
[4]: def calc_Avg_Percent_Error(target, output, index):

    targetNP = np.exp(target[:, index].cpu().detach().numpy())
    outputNP = np.exp(output[:, index].cpu().detach().numpy())

    difference = targetNP - outputNP
    difference = np.abs(difference)
    error = np.divide(difference, outputNP) * 100

    result = error.mean()

    return result
```

```
[5]: def getModelError(model, epochList, loss_function, trainDataset, testDataset):
    mseErrorList = []
    avgErrorList = []
    mseTrainList = []
    avgTrainList = []
    timeList = []

    #print("Epochs to test:", epochList)

    for numEpochs in epochList:

        #Reset model parameters
```

```

for layer in model.children():
    if hasattr(layer, 'reset_parameters'):
        layer.reset_parameters()

print("Training with", numEpochs, "epochs.")

#Define optimizer
optimizer = torch.optim.Adam(model.parameters(), lr=1e-2)

#Create dataloader for training set
dataloader = DataLoader(trainDataset, batch_size=batchSize,
→shuffle=True)

#Start clock
startTime = time.time()

#First train the network
trainNetwork(model, loss_function, optimizer, numEpochs, dataloader,
→numOutputs = 3)

#End clock
endTime = time.time()
timeSpent = endTime - startTime #In seconds

#Next test the network
model.eval()

#Create dataloader for testing set
testDataloader = DataLoader(testDataset, batch_size=math.floor(0.
→1*numPoints), shuffle=True)
iterDataLoader = iter(testDataloader)
testData = next(iterDataLoader)

#Process the intens value so it is in a log scale
intens = testData[:, 0:1]
logIntens = np.log(intens)

#Create the final tensor of inputs we will feed into the model
inputs = torch.cat((logIntens, testData[:,1:4]), axis = 1)

#Create the tensor of our actual values
target = testData[:, 4:7]
target = np.log(target)

#Push our tensors to the GPU
inputs = inputs.to('cuda')
target = target.to('cuda')

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inputs, target = inputs.float(), target.float()
target = target.reshape((target.shape[0], 3))

#Get the model predictions and apply a log-scale to our actual values
 #(Model predictions already have a log-scale applied to them)
output = model(inputs)
target = np.log(testData[:, 4:7])

#         print(output)
#         print(target)
#         print('\n')

#Initialize error lists
#Index mappings:
#0 = Max KE
#1 = Total Energy
#2 = Average Energy
error = [0., 0., 0.]
percentError = [0., 0., 0.]

print("Calculate error for test")
for index in range(3):
    error[index] = calc_MSE_Error(target, output, index)
    percentError[index] = calc_Avg_Percent_Error(target, output, index)

#Append error values into our list
mseErrorList.append(error)
avgErrorList.append(percentError)
timeList.append(timeSpent)

#Also retrieve the testing error

dataloader = DataLoader(trainDataset, batch_size=math.floor(0.1 *
↪ numPoints), shuffle=True)
iterDataLoader = iter(dataloader)
trainData = next(iterDataLoader)

#Process the intens value so it is in a log scale
intens = trainData[:, 0:1]
logIntens = np.log(intens)

#Create the final tensor of inputs we will feed into the model
inputs = torch.cat((logIntens, trainData[:, 1:4]), axis = 1)

```

```

        #Create the tensor of our actual values
        target = trainData[:, 4:7]
        target = np.log(target)

        #Push our tensors to the GPU
        inputs = inputs.to('cuda')
        target = target.to('cuda')

        inputs, target = inputs.float(), target.float()
        target = target.reshape((target.shape[0], 3))

        #Get the model predictions and apply a log-scale to our actual values
         #(Model predictions already have a log-scale applied to them)
        trainOutput = model(inputs)
        trainTarget = np.log(trainData[:, 4:7])

#         print(output)
#         print(target)

        print("Calculate error for train")

        trainError = [0., 0., 0.]
        trainPercentError = [0., 0., 0.]

        for index in range(3):
            trainError[index] = calc_MSE_Error(trainTarget, trainOutput, index)
            trainPercentError[index] = calc_Avg_Percent_Error(trainTarget,
→trainOutput, index)

        #Append error values
        mseTrainList.append(trainError)
        avgTrainList.append(trainPercentError)

    return mseErrorList, avgErrorList, mseTrainList, avgTrainList, timeList

```

1 Define our neural networks

```

[6]: #Neural network with 2 hidden layers

class MultiRegressor2Layers(nn.Module):
    '''
        Multilayer Perceptron for regression.
    '''
    def __init__(self):

```

```

super().__init__()
self.norm0 = nn.BatchNorm1d(4)
self.linear1 = nn.Linear(in_features=4, out_features=64)
self.norm1 = nn.BatchNorm1d(64)
self.act1 = nn.LeakyReLU()
self.dropout = nn.Dropout()
self.linear2 = nn.Linear(in_features=64, out_features=16)
self.norm2 = nn.BatchNorm1d(16)
#self.dropout = nn.Dropout()
self.act2 = nn.LeakyReLU()
self.linear3 = nn.Linear(in_features=16, out_features=8)
self.act3 = nn.LeakyReLU()
#self.dropout = nn.Dropout()
self.output = nn.Linear(in_features=8, out_features = 3)

def forward(self, x):
    '''
        Forward pass
    '''
    x = self.norm0(x)
    x = self.linear1(x)
    x = self.norm1(x)
    x = self.act1(x)
    #x = self.dropout(x)
    x = self.linear2(x)
    x = self.norm2(x)
    #x = self.dropout(x)
    x = self.act2(x)
    x = self.linear3(x)
    x = self.act3(x)
    #x = self.dropout(x)
    x = self.output(x)

    return x

```

[7]: *#Neural network with 1 hidden layer*

```

class MultiRegressor1Layer(nn.Module):
    '''
        Multilayer Perceptron for regression.
    '''
    def __init__(self):
        super().__init__()
        self.norm0 = nn.BatchNorm1d(4)

```

```

self.linear1 = nn.Linear(in_features=4, out_features=64)
self.norm1 = nn.BatchNorm1d(64)
self.act1 = nn.LeakyReLU()
self.dropout = nn.Dropout()
self.linear2 = nn.Linear(in_features=64, out_features=16)
self.norm2 = nn.BatchNorm1d(16)
#self.dropout = nn.Dropout()
self.act2 = nn.LeakyReLU()
self.output = nn.Linear(in_features=16, out_features = 3)

def forward(self, x):
    '''
        Forward pass
    '''
    x = self.norm0(x)
    x = self.linear1(x)
    x = self.norm1(x)
    x = self.act1(x)
    #x = self.dropout(x)
    x = self.linear2(x)
    x = self.norm2(x)
    #x = self.dropout(x)
    x = self.act2(x)
    x = self.output(x)

    return x

```

2 Read in the data

```

[8]: numPoints = 100000
    #numPoints = 500

    #filename = 'Data_Fuchs_v_2.2_lambda_um_0.8_points_' + str(numPoints) +
    #↳ '_seed_0.h5'
    filename = 'Data_Fuchs_v_2.2_Wright_Pat_Narrow_Range_lambda_um_0.8_points_' +
    #↳ str(numPoints) + '_seed_0.h5'

    h5File = h5py.File(filename, 'r+')

```

```

[9]: #Read columns

    intens = h5File['Intensity_(W_cm2)']
    duration = h5File['Pulse_Duration_(fs)']

```



```

thickness = h5File['Target_Thickness (um)']
spotSize = h5File['Spot_Size_(FWHM um)']
maxEnergy = h5File['Max_Proton_Energy_(MeV)']
totalEnergy = h5File['Total_Proton_Energy_(MeV)']
avgEnergy = h5File['Avg_Proton_Energy_(MeV)']

#Convert columns into numpy arrays
npIntens = np.fromiter(intens, float)
npDuration = np.fromiter(duration, float)
npThickness = np.fromiter(thickness, float)
npSpot = np.fromiter(spotSize, float)
npMaxEnergy = np.fromiter(maxEnergy, float)
npTotalEnergy = np.fromiter(totalEnergy, float)
npAvgEnergy = np.fromiter(avgEnergy, float)

#Join all of those arrays into one big numpy array
npFile = np.dstack((npIntens, npDuration, npThickness, npSpot, npMaxEnergy,
    ↳npTotalEnergy, npAvgEnergy))

npFile = npFile.reshape(numPoints, 7)

npTrain = npFile[:math.floor(.9*numPoints), 0:7]
npTest = npFile[math.floor(.9*numPoints):, 0:7]

print(npFile.shape)

```

(100000, 7)

3 Prepare our dataset

```

[10]: training_dataset = h5File.create_dataset(name=None, data=npTrain)
      test_dataset = h5File.create_dataset(name=None, data=npTest)

```

```

[11]: #Choose our loss function

      loss_function = nn.MSELoss()

```

```

[12]: #List which epochs we should test

      #epochList = [1]
      #epochList = [1, 2, 3]
      #epochList = [1, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80,
      ↳85, 90, 100, 150, 200, 250]
      #epochList = [1, 5, 10, 15, 20, 25, 50, 75, 100, 150, 200]
      epochList = [1, 5, 10, 15, 20, 50]

```

```
[13]: #Initialize neural network and dataloader
model1Layer = MultiRegressor1Layer().to('cuda')

model1LayerMSE, model1LayerPercentError, trainMSE, trainPercent, timeList =
    ↳getModelError(model1Layer, epochList, loss_function, training_dataset,
    ↳test_dataset)

# print(model1LayerMSE)
# print(trainMSE)
```

Training with 1 epochs.

Starting epoch 1

Loss after mini-batch	1: 0.222
Loss after mini-batch	11: 2.209
Loss after mini-batch	21: 2.001
Loss after mini-batch	31: 1.630
Loss after mini-batch	41: 1.308
Loss after mini-batch	51: 0.921
Loss after mini-batch	61: 0.630
Loss after mini-batch	71: 0.336
Loss after mini-batch	81: 0.150
Loss after mini-batch	91: 0.040
Loss after mini-batch	101: 0.013
Loss after mini-batch	111: 0.010
Loss after mini-batch	121: 0.008
Loss after mini-batch	131: 0.008
Loss after mini-batch	141: 0.010
Loss after mini-batch	151: 0.008
Loss after mini-batch	161: 0.005
Loss after mini-batch	171: 0.004
Loss after mini-batch	181: 0.005
Loss after mini-batch	191: 0.005
Loss after mini-batch	201: 0.007
Loss after mini-batch	211: 0.006
Loss after mini-batch	221: 0.007
Loss after mini-batch	231: 0.006
Loss after mini-batch	241: 0.005
Loss after mini-batch	251: 0.007
Loss after mini-batch	261: 0.003
Loss after mini-batch	271: 0.005
Loss after mini-batch	281: 0.005
Loss after mini-batch	291: 0.006
Loss after mini-batch	301: 0.003
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.003
Loss after mini-batch	331: 0.004
Loss after mini-batch	341: 0.004
Loss after mini-batch	351: 0.008

Loss after mini-batch	361: 0.008
Loss after mini-batch	371: 0.006
Loss after mini-batch	381: 0.007
Loss after mini-batch	391: 0.006
Loss after mini-batch	401: 0.003
Loss after mini-batch	411: 0.005
Loss after mini-batch	421: 0.007
Loss after mini-batch	431: 0.004
Loss after mini-batch	441: 0.006
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.003
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.004
Loss after mini-batch	491: 0.004
Loss after mini-batch	501: 0.004
Loss after mini-batch	511: 0.004
Loss after mini-batch	521: 0.004
Loss after mini-batch	531: 0.003
Loss after mini-batch	541: 0.005
Loss after mini-batch	551: 0.006
Loss after mini-batch	561: 0.004
Loss after mini-batch	571: 0.004
Loss after mini-batch	581: 0.003
Loss after mini-batch	591: 0.003
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.005
Loss after mini-batch	631: 0.005
Loss after mini-batch	641: 0.003
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.003
Loss after mini-batch	671: 0.003
Loss after mini-batch	681: 0.003
Loss after mini-batch	691: 0.005
Loss after mini-batch	701: 0.004
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.004
Loss after mini-batch	751: 0.004
Loss after mini-batch	761: 0.006
Loss after mini-batch	771: 0.003
Loss after mini-batch	781: 0.003
Loss after mini-batch	791: 0.003
Loss after mini-batch	801: 0.003
Loss after mini-batch	811: 0.005
Loss after mini-batch	821: 0.004
Loss after mini-batch	831: 0.006

Loss after mini-batch	841:	0.003
Loss after mini-batch	851:	0.006
Loss after mini-batch	861:	0.004
Loss after mini-batch	871:	0.003
Loss after mini-batch	881:	0.003
Loss after mini-batch	891:	0.002
Loss after mini-batch	901:	0.003
Loss after mini-batch	911:	0.003
Loss after mini-batch	921:	0.003
Loss after mini-batch	931:	0.003
Loss after mini-batch	941:	0.002
Loss after mini-batch	951:	0.002
Loss after mini-batch	961:	0.005
Loss after mini-batch	971:	0.003
Loss after mini-batch	981:	0.004
Loss after mini-batch	991:	0.004
Loss after mini-batch	1001:	0.005
Loss after mini-batch	1011:	0.002
Loss after mini-batch	1021:	0.004
Loss after mini-batch	1031:	0.005
Loss after mini-batch	1041:	0.003
Loss after mini-batch	1051:	0.002
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.003
Loss after mini-batch	1081:	0.002
Loss after mini-batch	1091:	0.003
Loss after mini-batch	1101:	0.004
Loss after mini-batch	1111:	0.004
Loss after mini-batch	1121:	0.004
Loss after mini-batch	1131:	0.003
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.005
Loss after mini-batch	1161:	0.003
Loss after mini-batch	1171:	0.005
Loss after mini-batch	1181:	0.003
Loss after mini-batch	1191:	0.002
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.003
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.003
Loss after mini-batch	1251:	0.004
Loss after mini-batch	1261:	0.004
Loss after mini-batch	1271:	0.004
Loss after mini-batch	1281:	0.004
Loss after mini-batch	1291:	0.004
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.001

Loss after mini-batch	1321:	0.002
Loss after mini-batch	1331:	0.003
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.003
Loss after mini-batch	1371:	0.003
Loss after mini-batch	1381:	0.003
Loss after mini-batch	1391:	0.007
Loss after mini-batch	1401:	0.003
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.003
Loss after mini-batch	1451:	0.003
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.003
Loss after mini-batch	1571:	0.003
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.003
Loss after mini-batch	1601:	0.003
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.003
Loss after mini-batch	1651:	0.003
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.003
Loss after mini-batch	1681:	0.005
Loss after mini-batch	1691:	0.004
Loss after mini-batch	1701:	0.003
Loss after mini-batch	1711:	0.003
Loss after mini-batch	1721:	0.003
Loss after mini-batch	1731:	0.003
Loss after mini-batch	1741:	0.004
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.005
Loss after mini-batch	1771:	0.003
Loss after mini-batch	1781:	0.003
Loss after mini-batch	1791:	0.003

Loss after mini-batch	1801:	0.003
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.003
Loss after mini-batch	1861:	0.003
Loss after mini-batch	1871:	0.003
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.003
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.004
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.003
Loss after mini-batch	1951:	0.004
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.003
Loss after mini-batch	1981:	0.002
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.003
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.004
Loss after mini-batch	2081:	0.004
Loss after mini-batch	2091:	0.003
Loss after mini-batch	2101:	0.003
Loss after mini-batch	2111:	0.003
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.003
Loss after mini-batch	2141:	0.004
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.004
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.004
Loss after mini-batch	2201:	0.003
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.003
Loss after mini-batch	2241:	0.003
Loss after mini-batch	2251:	0.003
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.003

Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.003
Loss after mini-batch	2301:	0.003
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.003
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.004
Loss after mini-batch	2391:	0.004
Loss after mini-batch	2401:	0.003
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.004
Loss after mini-batch	2431:	0.003
Loss after mini-batch	2441:	0.003
Loss after mini-batch	2451:	0.003
Loss after mini-batch	2461:	0.002
Loss after mini-batch	2471:	0.002
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.003
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.003
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.002
Loss after mini-batch	2551:	0.003
Loss after mini-batch	2561:	0.003
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.003
Loss after mini-batch	2601:	0.002
Loss after mini-batch	2611:	0.003
Loss after mini-batch	2621:	0.002
Loss after mini-batch	2631:	0.002
Loss after mini-batch	2641:	0.002
Loss after mini-batch	2651:	0.003
Loss after mini-batch	2661:	0.002
Loss after mini-batch	2671:	0.002
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.002
Loss after mini-batch	2701:	0.002
Loss after mini-batch	2711:	0.002
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.002
Loss after mini-batch	2751:	0.002

Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.003
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.003
Loss after mini-batch 2811: 0.002
Training process has finished.

Calculate error for test

Result: 5.6978141831636326e-06

Result: 1.826553267105639e-15

Result: 1.328771315295793e-07

Calculate error for train

Result: 5.751722253465613e-06

Result: 1.780939927964189e-15

Result: 1.3323290120690164e-07

Training with 5 epochs.

Starting epoch 1

Loss after mini-batch 1: 0.227
Loss after mini-batch 11: 2.150
Loss after mini-batch 21: 1.823
Loss after mini-batch 31: 1.534
Loss after mini-batch 41: 1.058
Loss after mini-batch 51: 0.807
Loss after mini-batch 61: 0.454
Loss after mini-batch 71: 0.224
Loss after mini-batch 81: 0.089
Loss after mini-batch 91: 0.028
Loss after mini-batch 101: 0.011
Loss after mini-batch 111: 0.011
Loss after mini-batch 121: 0.009
Loss after mini-batch 131: 0.012
Loss after mini-batch 141: 0.009
Loss after mini-batch 151: 0.011
Loss after mini-batch 161: 0.010
Loss after mini-batch 171: 0.007
Loss after mini-batch 181: 0.005
Loss after mini-batch 191: 0.006
Loss after mini-batch 201: 0.009
Loss after mini-batch 211: 0.004
Loss after mini-batch 221: 0.007
Loss after mini-batch 231: 0.005
Loss after mini-batch 241: 0.007
Loss after mini-batch 251: 0.005
Loss after mini-batch 261: 0.004
Loss after mini-batch 271: 0.008
Loss after mini-batch 281: 0.005
Loss after mini-batch 291: 0.005

Loss after mini-batch	301: 0.006
Loss after mini-batch	311: 0.003
Loss after mini-batch	321: 0.006
Loss after mini-batch	331: 0.004
Loss after mini-batch	341: 0.008
Loss after mini-batch	351: 0.007
Loss after mini-batch	361: 0.005
Loss after mini-batch	371: 0.003
Loss after mini-batch	381: 0.003
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.003
Loss after mini-batch	411: 0.004
Loss after mini-batch	421: 0.006
Loss after mini-batch	431: 0.005
Loss after mini-batch	441: 0.006
Loss after mini-batch	451: 0.004
Loss after mini-batch	461: 0.003
Loss after mini-batch	471: 0.004
Loss after mini-batch	481: 0.003
Loss after mini-batch	491: 0.005
Loss after mini-batch	501: 0.004
Loss after mini-batch	511: 0.005
Loss after mini-batch	521: 0.007
Loss after mini-batch	531: 0.003
Loss after mini-batch	541: 0.003
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.004
Loss after mini-batch	571: 0.003
Loss after mini-batch	581: 0.005
Loss after mini-batch	591: 0.006
Loss after mini-batch	601: 0.005
Loss after mini-batch	611: 0.003
Loss after mini-batch	621: 0.004
Loss after mini-batch	631: 0.006
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.003
Loss after mini-batch	661: 0.003
Loss after mini-batch	671: 0.004
Loss after mini-batch	681: 0.003
Loss after mini-batch	691: 0.005
Loss after mini-batch	701: 0.006
Loss after mini-batch	711: 0.003
Loss after mini-batch	721: 0.003
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.004
Loss after mini-batch	751: 0.003
Loss after mini-batch	761: 0.004
Loss after mini-batch	771: 0.005

Loss after mini-batch	781: 0.005
Loss after mini-batch	791: 0.002
Loss after mini-batch	801: 0.004
Loss after mini-batch	811: 0.003
Loss after mini-batch	821: 0.003
Loss after mini-batch	831: 0.003
Loss after mini-batch	841: 0.003
Loss after mini-batch	851: 0.003
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.004
Loss after mini-batch	881: 0.005
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.004
Loss after mini-batch	911: 0.004
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.003
Loss after mini-batch	941: 0.004
Loss after mini-batch	951: 0.003
Loss after mini-batch	961: 0.005
Loss after mini-batch	971: 0.005
Loss after mini-batch	981: 0.003
Loss after mini-batch	991: 0.003
Loss after mini-batch	1001: 0.004
Loss after mini-batch	1011: 0.004
Loss after mini-batch	1021: 0.003
Loss after mini-batch	1031: 0.003
Loss after mini-batch	1041: 0.003
Loss after mini-batch	1051: 0.002
Loss after mini-batch	1061: 0.004
Loss after mini-batch	1071: 0.005
Loss after mini-batch	1081: 0.002
Loss after mini-batch	1091: 0.002
Loss after mini-batch	1101: 0.006
Loss after mini-batch	1111: 0.003
Loss after mini-batch	1121: 0.004
Loss after mini-batch	1131: 0.003
Loss after mini-batch	1141: 0.003
Loss after mini-batch	1151: 0.003
Loss after mini-batch	1161: 0.004
Loss after mini-batch	1171: 0.002
Loss after mini-batch	1181: 0.004
Loss after mini-batch	1191: 0.003
Loss after mini-batch	1201: 0.003
Loss after mini-batch	1211: 0.003
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.002
Loss after mini-batch	1241: 0.003
Loss after mini-batch	1251: 0.003

Loss after mini-batch	1261:	0.003
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.003
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.003
Loss after mini-batch	1321:	0.004
Loss after mini-batch	1331:	0.004
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.004
Loss after mini-batch	1371:	0.004
Loss after mini-batch	1381:	0.003
Loss after mini-batch	1391:	0.003
Loss after mini-batch	1401:	0.003
Loss after mini-batch	1411:	0.003
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.003
Loss after mini-batch	1441:	0.003
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.004
Loss after mini-batch	1481:	0.003
Loss after mini-batch	1491:	0.004
Loss after mini-batch	1501:	0.003
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.003
Loss after mini-batch	1531:	0.005
Loss after mini-batch	1541:	0.005
Loss after mini-batch	1551:	0.004
Loss after mini-batch	1561:	0.003
Loss after mini-batch	1571:	0.003
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.003
Loss after mini-batch	1601:	0.004
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.004
Loss after mini-batch	1651:	0.003
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.003
Loss after mini-batch	1681:	0.003
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.005
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.003

Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.004
Loss after mini-batch	1781:	0.003
Loss after mini-batch	1791:	0.004
Loss after mini-batch	1801:	0.004
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.003
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.003
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.003
Loss after mini-batch	1891:	0.004
Loss after mini-batch	1901:	0.003
Loss after mini-batch	1911:	0.003
Loss after mini-batch	1921:	0.003
Loss after mini-batch	1931:	0.003
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.003
Loss after mini-batch	1961:	0.003
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.002
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.003
Loss after mini-batch	2011:	0.004
Loss after mini-batch	2021:	0.003
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.004
Loss after mini-batch	2051:	0.003
Loss after mini-batch	2061:	0.004
Loss after mini-batch	2071:	0.003
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.003
Loss after mini-batch	2101:	0.005
Loss after mini-batch	2111:	0.003
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.004
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.003
Loss after mini-batch	2191:	0.003
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.003

Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.003
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.003
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.003
Loss after mini-batch	2281:	0.003
Loss after mini-batch	2291:	0.004
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.004
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.003
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.004
Loss after mini-batch	2361:	0.003
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.003
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.003
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.002
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.003
Loss after mini-batch	2461:	0.002
Loss after mini-batch	2471:	0.003
Loss after mini-batch	2481:	0.003
Loss after mini-batch	2491:	0.004
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.002
Loss after mini-batch	2521:	0.003
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.002
Loss after mini-batch	2551:	0.003
Loss after mini-batch	2561:	0.003
Loss after mini-batch	2571:	0.003
Loss after mini-batch	2581:	0.003
Loss after mini-batch	2591:	0.003
Loss after mini-batch	2601:	0.002
Loss after mini-batch	2611:	0.003
Loss after mini-batch	2621:	0.002
Loss after mini-batch	2631:	0.002
Loss after mini-batch	2641:	0.004
Loss after mini-batch	2651:	0.003
Loss after mini-batch	2661:	0.002
Loss after mini-batch	2671:	0.003
Loss after mini-batch	2681:	0.002
Loss after mini-batch	2691:	0.002

```

Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.002
Loss after mini-batch 2721: 0.003
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.002
Loss after mini-batch 2751: 0.004
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.003
Starting epoch 2
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.002
Loss after mini-batch 21: 0.003
Loss after mini-batch 31: 0.003
Loss after mini-batch 41: 0.002
Loss after mini-batch 51: 0.004
Loss after mini-batch 61: 0.004
Loss after mini-batch 71: 0.003
Loss after mini-batch 81: 0.002
Loss after mini-batch 91: 0.002
Loss after mini-batch 101: 0.003
Loss after mini-batch 111: 0.002
Loss after mini-batch 121: 0.002
Loss after mini-batch 131: 0.002
Loss after mini-batch 141: 0.001
Loss after mini-batch 151: 0.002
Loss after mini-batch 161: 0.002
Loss after mini-batch 171: 0.004
Loss after mini-batch 181: 0.002
Loss after mini-batch 191: 0.001
Loss after mini-batch 201: 0.004
Loss after mini-batch 211: 0.001
Loss after mini-batch 221: 0.002
Loss after mini-batch 231: 0.002
Loss after mini-batch 241: 0.002
Loss after mini-batch 251: 0.002
Loss after mini-batch 261: 0.001
Loss after mini-batch 271: 0.003
Loss after mini-batch 281: 0.003
Loss after mini-batch 291: 0.003
Loss after mini-batch 301: 0.002
Loss after mini-batch 311: 0.002
Loss after mini-batch 321: 0.001
Loss after mini-batch 331: 0.002
Loss after mini-batch 341: 0.002

```

Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.002
Loss after mini-batch	371: 0.003
Loss after mini-batch	381: 0.002
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.003
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.003
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.005
Loss after mini-batch	561: 0.004
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.004
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.003
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.003
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.004
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.002
Loss after mini-batch	801: 0.003
Loss after mini-batch	811: 0.002
Loss after mini-batch	821: 0.001

Loss after mini-batch	831: 0.003
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.003
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.005
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.002
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.002
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.003
Loss after mini-batch	1031: 0.003
Loss after mini-batch	1041: 0.002
Loss after mini-batch	1051: 0.002
Loss after mini-batch	1061: 0.003
Loss after mini-batch	1071: 0.003
Loss after mini-batch	1081: 0.002
Loss after mini-batch	1091: 0.002
Loss after mini-batch	1101: 0.002
Loss after mini-batch	1111: 0.002
Loss after mini-batch	1121: 0.002
Loss after mini-batch	1131: 0.002
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.002
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.002
Loss after mini-batch	1181: 0.002
Loss after mini-batch	1191: 0.002
Loss after mini-batch	1201: 0.003
Loss after mini-batch	1211: 0.002
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.002
Loss after mini-batch	1241: 0.002
Loss after mini-batch	1251: 0.002
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.002
Loss after mini-batch	1281: 0.002
Loss after mini-batch	1291: 0.002
Loss after mini-batch	1301: 0.004

Loss after mini-batch	1311:	0.004
Loss after mini-batch	1321:	0.006
Loss after mini-batch	1331:	0.004
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.003
Loss after mini-batch	1441:	0.003
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.003
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.003
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.003
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.003
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.003
Loss after mini-batch	1751:	0.003
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.003
Loss after mini-batch	1781:	0.002

Loss after mini-batch	1791:	0.003
Loss after mini-batch	1801:	0.003
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.004
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.003
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.003
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.003
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.003
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.004
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.005
Loss after mini-batch	2171:	0.004
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.003
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.002

Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.003
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.003
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.002
Loss after mini-batch	2461:	0.002
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.002
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.002
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.002
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.002
Loss after mini-batch	2571:	0.002
Loss after mini-batch	2581:	0.003
Loss after mini-batch	2591:	0.003
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.002
Loss after mini-batch	2621:	0.005
Loss after mini-batch	2631:	0.002
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.002
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.002
Loss after mini-batch	2691:	0.002
Loss after mini-batch	2701:	0.002
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.003
Loss after mini-batch	2731:	0.002
Loss after mini-batch	2741:	0.003

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Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.004
Loss after mini-batch 2811: 0.002
Starting epoch 3
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.003
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.004
Loss after mini-batch     81: 0.004
Loss after mini-batch     91: 0.003
Loss after mini-batch    101: 0.002
Loss after mini-batch    111: 0.002
Loss after mini-batch    121: 0.002
Loss after mini-batch    131: 0.002
Loss after mini-batch    141: 0.002
Loss after mini-batch    151: 0.002
Loss after mini-batch    161: 0.002
Loss after mini-batch    171: 0.003
Loss after mini-batch    181: 0.003
Loss after mini-batch    191: 0.003
Loss after mini-batch    201: 0.002
Loss after mini-batch    211: 0.003
Loss after mini-batch    221: 0.002
Loss after mini-batch    231: 0.002
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.003
Loss after mini-batch    261: 0.002
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.002
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.002
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.002
Loss after mini-batch    341: 0.002
Loss after mini-batch    351: 0.002
Loss after mini-batch    361: 0.002
Loss after mini-batch    371: 0.001
Loss after mini-batch    381: 0.002
Loss after mini-batch    391: 0.002

```

Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.003
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.002
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.003
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.003
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.002
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.003

Loss after mini-batch	881:	0.003
Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.002
Loss after mini-batch	911:	0.002
Loss after mini-batch	921:	0.004
Loss after mini-batch	931:	0.002
Loss after mini-batch	941:	0.002
Loss after mini-batch	951:	0.002
Loss after mini-batch	961:	0.002
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.002
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.002
Loss after mini-batch	1031:	0.002
Loss after mini-batch	1041:	0.002
Loss after mini-batch	1051:	0.002
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.002
Loss after mini-batch	1091:	0.002
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.002
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.002
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.003
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.003
Loss after mini-batch	1321:	0.002
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.003

Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.003
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.004
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.003
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.003
Loss after mini-batch	1591:	0.003
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.003
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.003
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.002
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.003

Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.005
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.003
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.003
Loss after mini-batch	2251:	0.003
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.002
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.002

Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.002
Loss after mini-batch	2521:	0.002
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.002
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.002
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.002
Loss after mini-batch	2671:	0.002
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.002
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.002
Loss after mini-batch	2761:	0.002
Loss after mini-batch	2771:	0.003
Loss after mini-batch	2781:	0.002
Loss after mini-batch	2791:	0.001

```

Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 4
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.002
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.002
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.002
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.002
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.002
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.002
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.002
Loss after mini-batch    251: 0.002
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.002
Loss after mini-batch    281: 0.002
Loss after mini-batch    291: 0.002
Loss after mini-batch    301: 0.002
Loss after mini-batch    311: 0.002
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.002
Loss after mini-batch    381: 0.002
Loss after mini-batch    391: 0.001
Loss after mini-batch    401: 0.002
Loss after mini-batch    411: 0.001
Loss after mini-batch    421: 0.002
Loss after mini-batch    431: 0.002
Loss after mini-batch    441: 0.001

```

Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.003
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.003
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.002
Loss after mini-batch	821: 0.002
Loss after mini-batch	831: 0.003
Loss after mini-batch	841: 0.003
Loss after mini-batch	851: 0.003
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001

Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.002
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.002
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.002
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.002
Loss after mini-batch	1051:	0.002
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.002
Loss after mini-batch	1081:	0.002
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.003
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001

Loss after mini-batch	1411:	0.003
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.003
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002

Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.003
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.003
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.002
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.002

```

Loss after mini-batch 2371: 0.002
Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.002
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.001
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.002
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.002
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.002
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.002
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.003
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 5
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001

```

Loss after mini-batch	21: 0.001
Loss after mini-batch	31: 0.001
Loss after mini-batch	41: 0.002
Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.001
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.000
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.000
Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.002
Loss after mini-batch	181: 0.002
Loss after mini-batch	191: 0.002
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.002
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.003
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.002
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.002

Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.003
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001

Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.003
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.000
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001

Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001

Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001

Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.002
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.002
Loss after mini-batch 2501: 0.002
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.002
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.002
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.002
Training process has finished.

Calculate error for test

Result: 1.8739067296662588e-05

Result: 2.733749983124259e-15

Result: 2.9702573796996083e-07

Calculate error for train

Result: 1.828420918622595e-05

Result: 2.6569664252781055e-15

Result: 2.891211371696739e-07

Training with 10 epochs.

Starting epoch 1

Loss after mini-batch	1:	0.240
Loss after mini-batch	11:	2.160
Loss after mini-batch	21:	1.903
Loss after mini-batch	31:	1.499
Loss after mini-batch	41:	1.156
Loss after mini-batch	51:	0.764
Loss after mini-batch	61:	0.467
Loss after mini-batch	71:	0.222
Loss after mini-batch	81:	0.073
Loss after mini-batch	91:	0.023
Loss after mini-batch	101:	0.010
Loss after mini-batch	111:	0.008
Loss after mini-batch	121:	0.007
Loss after mini-batch	131:	0.004
Loss after mini-batch	141:	0.006
Loss after mini-batch	151:	0.004
Loss after mini-batch	161:	0.006
Loss after mini-batch	171:	0.016
Loss after mini-batch	181:	0.003
Loss after mini-batch	191:	0.004
Loss after mini-batch	201:	0.003
Loss after mini-batch	211:	0.005
Loss after mini-batch	221:	0.005
Loss after mini-batch	231:	0.007
Loss after mini-batch	241:	0.004
Loss after mini-batch	251:	0.005
Loss after mini-batch	261:	0.005
Loss after mini-batch	271:	0.010
Loss after mini-batch	281:	0.007
Loss after mini-batch	291:	0.005
Loss after mini-batch	301:	0.005
Loss after mini-batch	311:	0.005
Loss after mini-batch	321:	0.004
Loss after mini-batch	331:	0.010
Loss after mini-batch	341:	0.005
Loss after mini-batch	351:	0.006
Loss after mini-batch	361:	0.006
Loss after mini-batch	371:	0.004
Loss after mini-batch	381:	0.006
Loss after mini-batch	391:	0.004
Loss after mini-batch	401:	0.004
Loss after mini-batch	411:	0.003
Loss after mini-batch	421:	0.003
Loss after mini-batch	431:	0.004

Loss after mini-batch	441: 0.007
Loss after mini-batch	451: 0.010
Loss after mini-batch	461: 0.005
Loss after mini-batch	471: 0.004
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.005
Loss after mini-batch	501: 0.004
Loss after mini-batch	511: 0.003
Loss after mini-batch	521: 0.006
Loss after mini-batch	531: 0.006
Loss after mini-batch	541: 0.006
Loss after mini-batch	551: 0.004
Loss after mini-batch	561: 0.003
Loss after mini-batch	571: 0.005
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.004
Loss after mini-batch	601: 0.005
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.006
Loss after mini-batch	631: 0.006
Loss after mini-batch	641: 0.003
Loss after mini-batch	651: 0.004
Loss after mini-batch	661: 0.003
Loss after mini-batch	671: 0.003
Loss after mini-batch	681: 0.004
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.003
Loss after mini-batch	711: 0.004
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.005
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.004
Loss after mini-batch	771: 0.006
Loss after mini-batch	781: 0.004
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.003
Loss after mini-batch	811: 0.005
Loss after mini-batch	821: 0.005
Loss after mini-batch	831: 0.003
Loss after mini-batch	841: 0.003
Loss after mini-batch	851: 0.004
Loss after mini-batch	861: 0.006
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.003
Loss after mini-batch	901: 0.004
Loss after mini-batch	911: 0.003

Loss after mini-batch	921:	0.003
Loss after mini-batch	931:	0.005
Loss after mini-batch	941:	0.003
Loss after mini-batch	951:	0.002
Loss after mini-batch	961:	0.004
Loss after mini-batch	971:	0.004
Loss after mini-batch	981:	0.004
Loss after mini-batch	991:	0.002
Loss after mini-batch	1001:	0.003
Loss after mini-batch	1011:	0.002
Loss after mini-batch	1021:	0.004
Loss after mini-batch	1031:	0.003
Loss after mini-batch	1041:	0.003
Loss after mini-batch	1051:	0.002
Loss after mini-batch	1061:	0.003
Loss after mini-batch	1071:	0.004
Loss after mini-batch	1081:	0.003
Loss after mini-batch	1091:	0.004
Loss after mini-batch	1101:	0.003
Loss after mini-batch	1111:	0.003
Loss after mini-batch	1121:	0.003
Loss after mini-batch	1131:	0.004
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.003
Loss after mini-batch	1161:	0.003
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.003
Loss after mini-batch	1191:	0.005
Loss after mini-batch	1201:	0.003
Loss after mini-batch	1211:	0.004
Loss after mini-batch	1221:	0.003
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.002
Loss after mini-batch	1261:	0.003
Loss after mini-batch	1271:	0.005
Loss after mini-batch	1281:	0.005
Loss after mini-batch	1291:	0.004
Loss after mini-batch	1301:	0.003
Loss after mini-batch	1311:	0.003
Loss after mini-batch	1321:	0.004
Loss after mini-batch	1331:	0.003
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.003
Loss after mini-batch	1361:	0.003
Loss after mini-batch	1371:	0.004
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.003

Loss after mini-batch	1401:	0.003
Loss after mini-batch	1411:	0.003
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.003
Loss after mini-batch	1441:	0.003
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.003
Loss after mini-batch	1471:	0.003
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.003
Loss after mini-batch	1511:	0.003
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.003
Loss after mini-batch	1551:	0.003
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.003
Loss after mini-batch	1581:	0.004
Loss after mini-batch	1591:	0.003
Loss after mini-batch	1601:	0.005
Loss after mini-batch	1611:	0.003
Loss after mini-batch	1621:	0.003
Loss after mini-batch	1631:	0.004
Loss after mini-batch	1641:	0.003
Loss after mini-batch	1651:	0.005
Loss after mini-batch	1661:	0.003
Loss after mini-batch	1671:	0.004
Loss after mini-batch	1681:	0.004
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.003
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.004
Loss after mini-batch	1791:	0.004
Loss after mini-batch	1801:	0.003
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.003
Loss after mini-batch	1841:	0.003
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.002

Loss after mini-batch	1881:	0.004
Loss after mini-batch	1891:	0.003
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.004
Loss after mini-batch	1931:	0.004
Loss after mini-batch	1941:	0.003
Loss after mini-batch	1951:	0.003
Loss after mini-batch	1961:	0.005
Loss after mini-batch	1971:	0.005
Loss after mini-batch	1981:	0.003
Loss after mini-batch	1991:	0.004
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.004
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.003
Loss after mini-batch	2051:	0.003
Loss after mini-batch	2061:	0.003
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.003
Loss after mini-batch	2151:	0.003
Loss after mini-batch	2161:	0.003
Loss after mini-batch	2171:	0.003
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.002
Loss after mini-batch	2201:	0.003
Loss after mini-batch	2211:	0.003
Loss after mini-batch	2221:	0.003
Loss after mini-batch	2231:	0.003
Loss after mini-batch	2241:	0.004
Loss after mini-batch	2251:	0.003
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.003
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.003
Loss after mini-batch	2301:	0.003
Loss after mini-batch	2311:	0.003
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.003

```
Loss after mini-batch 2361: 0.002
Loss after mini-batch 2371: 0.003
Loss after mini-batch 2381: 0.003
Loss after mini-batch 2391: 0.002
Loss after mini-batch 2401: 0.002
Loss after mini-batch 2411: 0.001
Loss after mini-batch 2421: 0.002
Loss after mini-batch 2431: 0.003
Loss after mini-batch 2441: 0.005
Loss after mini-batch 2451: 0.003
Loss after mini-batch 2461: 0.003
Loss after mini-batch 2471: 0.003
Loss after mini-batch 2481: 0.003
Loss after mini-batch 2491: 0.003
Loss after mini-batch 2501: 0.002
Loss after mini-batch 2511: 0.002
Loss after mini-batch 2521: 0.003
Loss after mini-batch 2531: 0.002
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.002
Loss after mini-batch 2561: 0.003
Loss after mini-batch 2571: 0.002
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.005
Loss after mini-batch 2601: 0.003
Loss after mini-batch 2611: 0.002
Loss after mini-batch 2621: 0.004
Loss after mini-batch 2631: 0.003
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.003
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.003
Loss after mini-batch 2711: 0.004
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.003
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.003
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.002
Starting epoch 2
Loss after mini-batch      1: 0.000
```

Loss after mini-batch	11: 0.001
Loss after mini-batch	21: 0.002
Loss after mini-batch	31: 0.001
Loss after mini-batch	41: 0.001
Loss after mini-batch	51: 0.003
Loss after mini-batch	61: 0.003
Loss after mini-batch	71: 0.002
Loss after mini-batch	81: 0.003
Loss after mini-batch	91: 0.003
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.002
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.002
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.004
Loss after mini-batch	181: 0.003
Loss after mini-batch	191: 0.002
Loss after mini-batch	201: 0.003
Loss after mini-batch	211: 0.004
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.003
Loss after mini-batch	241: 0.002
Loss after mini-batch	251: 0.002
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.003
Loss after mini-batch	281: 0.003
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.004
Loss after mini-batch	311: 0.003
Loss after mini-batch	321: 0.007
Loss after mini-batch	331: 0.004
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.002
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.003
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.003
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.002

Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.003
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.003
Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.003
Loss after mini-batch	581: 0.003
Loss after mini-batch	591: 0.006
Loss after mini-batch	601: 0.003
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.003
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.003
Loss after mini-batch	741: 0.003
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.003
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.003
Loss after mini-batch	791: 0.003
Loss after mini-batch	801: 0.003
Loss after mini-batch	811: 0.003
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.003
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.003
Loss after mini-batch	921: 0.003
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.003
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.002

Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.002
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.002
Loss after mini-batch	1031:	0.002
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.002
Loss after mini-batch	1081:	0.003
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.002
Loss after mini-batch	1111:	0.003
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.003
Loss after mini-batch	1161:	0.003
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.003
Loss after mini-batch	1201:	0.003
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.004
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.002
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.003
Loss after mini-batch	1311:	0.003
Loss after mini-batch	1321:	0.002
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.003
Loss after mini-batch	1401:	0.003
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001

Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.003
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.003
Loss after mini-batch	1671:	0.003
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.003
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.003
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.003
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.002
Loss after mini-batch	1901:	0.003
Loss after mini-batch	1911:	0.004
Loss after mini-batch	1921:	0.004

Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.003
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.002
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.003
Loss after mini-batch	2021:	0.005
Loss after mini-batch	2031:	0.003
Loss after mini-batch	2041:	0.003
Loss after mini-batch	2051:	0.003
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.002
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.003
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.002


```

Loss after mini-batch 2411: 0.002
Loss after mini-batch 2421: 0.002
Loss after mini-batch 2431: 0.002
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.002
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.002
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.002
Loss after mini-batch 2501: 0.002
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.002
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.002
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.002
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.003
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.003
Loss after mini-batch 2631: 0.002
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.003
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.003
Loss after mini-batch 2711: 0.002
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.003
Loss after mini-batch 2761: 0.003
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.004
Starting epoch 3
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.003
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.002
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001

```

Loss after mini-batch	61: 0.002
Loss after mini-batch	71: 0.002
Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.002
Loss after mini-batch	101: 0.002
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.002
Loss after mini-batch	181: 0.002
Loss after mini-batch	191: 0.002
Loss after mini-batch	201: 0.002
Loss after mini-batch	211: 0.003
Loss after mini-batch	221: 0.003
Loss after mini-batch	231: 0.002
Loss after mini-batch	241: 0.004
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.002
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.003
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.003
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.002
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.003
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.002

Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.003
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.003
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.003
Loss after mini-batch	821: 0.002
Loss after mini-batch	831: 0.002
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.002
Loss after mini-batch	971: 0.002
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.001

Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.003
Loss after mini-batch	1101:	0.002
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.004
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.002
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.003
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.003
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001

Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.003
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.003
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.002
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.003
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.002
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.003
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001

Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.003
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001

```

Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.002
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.002
Loss after mini-batch 2521: 0.002
Loss after mini-batch 2531: 0.003
Loss after mini-batch 2541: 0.003
Loss after mini-batch 2551: 0.002
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.002
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.003
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.003
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.003
Loss after mini-batch 2771: 0.003
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.003
Loss after mini-batch 2811: 0.004
Starting epoch 4
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.002
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.002
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.002
Loss after mini-batch 81: 0.001
Loss after mini-batch 91: 0.001
Loss after mini-batch 101: 0.001

```

Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.002
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.002
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.002
Loss after mini-batch	241: 0.002
Loss after mini-batch	251: 0.002
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.003
Loss after mini-batch	281: 0.002
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.003
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001

Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.003
Loss after mini-batch	741: 0.003
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.002
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.002
Loss after mini-batch	991: 0.002
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.002
Loss after mini-batch	1061: 0.001

Loss after mini-batch	1071:	0.002
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.003
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.003
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.003
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001

Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.004
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.002
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001

Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.002
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.002
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.002
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001

```

Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.002
Loss after mini-batch 2541: 0.002
Loss after mini-batch 2551: 0.003
Loss after mini-batch 2561: 0.003
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.002
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.002
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.003
Loss after mini-batch 2811: 0.001
Starting epoch 5
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.002
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.002

```

Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.002
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.003
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001

Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.003
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.002
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.000
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001

Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.002
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.004
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.002
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001

Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001

Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.000
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.002
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.002
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001

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Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 6
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.002
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.002
Loss after mini-batch    101: 0.002
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.000
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.000

```

Loss after mini-batch	211: 0.000
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.002
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.002
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001

Loss after mini-batch	691:	0.001
Loss after mini-batch	701:	0.001
Loss after mini-batch	711:	0.001
Loss after mini-batch	721:	0.001
Loss after mini-batch	731:	0.001
Loss after mini-batch	741:	0.001
Loss after mini-batch	751:	0.001
Loss after mini-batch	761:	0.001
Loss after mini-batch	771:	0.001
Loss after mini-batch	781:	0.001
Loss after mini-batch	791:	0.002
Loss after mini-batch	801:	0.001
Loss after mini-batch	811:	0.000
Loss after mini-batch	821:	0.000
Loss after mini-batch	831:	0.002
Loss after mini-batch	841:	0.002
Loss after mini-batch	851:	0.001
Loss after mini-batch	861:	0.001
Loss after mini-batch	871:	0.001
Loss after mini-batch	881:	0.002
Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.002
Loss after mini-batch	911:	0.002
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.000
Loss after mini-batch	941:	0.002
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.002
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001

Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.000
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001

Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.000
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.003
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.002
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001

Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.003
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.002
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.002
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.000
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.002
Loss after mini-batch	2571:	0.002
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001


```

Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.003
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 7
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.002
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.000
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.000
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.002

```

Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.000
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001

Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.002
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.002
Loss after mini-batch	1141: 0.002
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.002
Loss after mini-batch	1181: 0.002
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.000
Loss after mini-batch	1211: 0.001

Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001

Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.003
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001

Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.000
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.003
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.000
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.002
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.002

```

Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.000
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 8
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.002
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.002
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.002
Loss after mini-batch    281: 0.002
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001

```

Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.000
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001

Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.002
Loss after mini-batch	1101: 0.002
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.002
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.002
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.000
Loss after mini-batch	1261: 0.000

Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.000

Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001

Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.000
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.000
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.000

```

Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 9
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.002
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.002
Loss after mini-batch    201: 0.002
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.003
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.002
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.002
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001

```

Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.002
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001

Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.000
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.002
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.000
Loss after mini-batch	1151: 0.000
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.001
Loss after mini-batch	1291: 0.001
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.001

Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.003
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000

Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.003
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001

Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.000
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.000
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.000
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001

```

Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 10
Loss after mini-batch      1: 0.001
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.000
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.003
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.002
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.000
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.000
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.000
Loss after mini-batch    341: 0.000
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.001
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.001
Loss after mini-batch    401: 0.000

```

Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.003
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.000
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.000
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001

Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.000
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.000
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.002
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001

Loss after mini-batch 1371: 0.000
Loss after mini-batch 1381: 0.001
Loss after mini-batch 1391: 0.001
Loss after mini-batch 1401: 0.001
Loss after mini-batch 1411: 0.001
Loss after mini-batch 1421: 0.000
Loss after mini-batch 1431: 0.001
Loss after mini-batch 1441: 0.000
Loss after mini-batch 1451: 0.001
Loss after mini-batch 1461: 0.001
Loss after mini-batch 1471: 0.000
Loss after mini-batch 1481: 0.001
Loss after mini-batch 1491: 0.001
Loss after mini-batch 1501: 0.002
Loss after mini-batch 1511: 0.002
Loss after mini-batch 1521: 0.000
Loss after mini-batch 1531: 0.001
Loss after mini-batch 1541: 0.000
Loss after mini-batch 1551: 0.001
Loss after mini-batch 1561: 0.001
Loss after mini-batch 1571: 0.001
Loss after mini-batch 1581: 0.001
Loss after mini-batch 1591: 0.001
Loss after mini-batch 1601: 0.001
Loss after mini-batch 1611: 0.001
Loss after mini-batch 1621: 0.001
Loss after mini-batch 1631: 0.002
Loss after mini-batch 1641: 0.001
Loss after mini-batch 1651: 0.001
Loss after mini-batch 1661: 0.001
Loss after mini-batch 1671: 0.001
Loss after mini-batch 1681: 0.001
Loss after mini-batch 1691: 0.001
Loss after mini-batch 1701: 0.001
Loss after mini-batch 1711: 0.002
Loss after mini-batch 1721: 0.002
Loss after mini-batch 1731: 0.000
Loss after mini-batch 1741: 0.000
Loss after mini-batch 1751: 0.001
Loss after mini-batch 1761: 0.001
Loss after mini-batch 1771: 0.001
Loss after mini-batch 1781: 0.001
Loss after mini-batch 1791: 0.003
Loss after mini-batch 1801: 0.001
Loss after mini-batch 1811: 0.001
Loss after mini-batch 1821: 0.001
Loss after mini-batch 1831: 0.002
Loss after mini-batch 1841: 0.001

Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.004
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001

Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.000
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.002
Loss after mini-batch	2461:	0.002
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.000
Loss after mini-batch	2551:	0.002
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.000
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.000
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.000
Loss after mini-batch	2661:	0.000
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.000
Loss after mini-batch	2711:	0.000
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001
Loss after mini-batch	2761:	0.001
Loss after mini-batch	2771:	0.001
Loss after mini-batch	2781:	0.001
Loss after mini-batch	2791:	0.001
Loss after mini-batch	2801:	0.001

Loss after mini-batch 2811: 0.001
Training process has finished.

Calculate error for test

Result: 8.479282063237006e-06

Result: 2.7615405287048097e-15

Result: 1.619183970067513e-07

Calculate error for train

Result: 8.695034595673081e-06

Result: 2.8894699096341713e-15

Result: 1.6507651750966625e-07

Training with 15 epochs.

Starting epoch 1

Loss after mini-batch	1:	0.247
Loss after mini-batch	11:	2.121
Loss after mini-batch	21:	1.883
Loss after mini-batch	31:	1.448
Loss after mini-batch	41:	1.021
Loss after mini-batch	51:	0.736
Loss after mini-batch	61:	0.421
Loss after mini-batch	71:	0.180
Loss after mini-batch	81:	0.063
Loss after mini-batch	91:	0.017
Loss after mini-batch	101:	0.013
Loss after mini-batch	111:	0.008
Loss after mini-batch	121:	0.015
Loss after mini-batch	131:	0.009
Loss after mini-batch	141:	0.006
Loss after mini-batch	151:	0.009
Loss after mini-batch	161:	0.007
Loss after mini-batch	171:	0.008
Loss after mini-batch	181:	0.005
Loss after mini-batch	191:	0.006
Loss after mini-batch	201:	0.006
Loss after mini-batch	211:	0.005
Loss after mini-batch	221:	0.007
Loss after mini-batch	231:	0.007
Loss after mini-batch	241:	0.006
Loss after mini-batch	251:	0.004
Loss after mini-batch	261:	0.006
Loss after mini-batch	271:	0.007
Loss after mini-batch	281:	0.006
Loss after mini-batch	291:	0.005
Loss after mini-batch	301:	0.004
Loss after mini-batch	311:	0.007
Loss after mini-batch	321:	0.007
Loss after mini-batch	331:	0.008
Loss after mini-batch	341:	0.006

Loss after mini-batch	351: 0.006
Loss after mini-batch	361: 0.004
Loss after mini-batch	371: 0.004
Loss after mini-batch	381: 0.005
Loss after mini-batch	391: 0.004
Loss after mini-batch	401: 0.003
Loss after mini-batch	411: 0.006
Loss after mini-batch	421: 0.007
Loss after mini-batch	431: 0.006
Loss after mini-batch	441: 0.007
Loss after mini-batch	451: 0.004
Loss after mini-batch	461: 0.005
Loss after mini-batch	471: 0.004
Loss after mini-batch	481: 0.005
Loss after mini-batch	491: 0.003
Loss after mini-batch	501: 0.005
Loss after mini-batch	511: 0.009
Loss after mini-batch	521: 0.004
Loss after mini-batch	531: 0.005
Loss after mini-batch	541: 0.004
Loss after mini-batch	551: 0.011
Loss after mini-batch	561: 0.009
Loss after mini-batch	571: 0.005
Loss after mini-batch	581: 0.005
Loss after mini-batch	591: 0.006
Loss after mini-batch	601: 0.005
Loss after mini-batch	611: 0.003
Loss after mini-batch	621: 0.003
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.003
Loss after mini-batch	651: 0.004
Loss after mini-batch	661: 0.004
Loss after mini-batch	671: 0.004
Loss after mini-batch	681: 0.003
Loss after mini-batch	691: 0.004
Loss after mini-batch	701: 0.005
Loss after mini-batch	711: 0.004
Loss after mini-batch	721: 0.006
Loss after mini-batch	731: 0.007
Loss after mini-batch	741: 0.004
Loss after mini-batch	751: 0.005
Loss after mini-batch	761: 0.003
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.003
Loss after mini-batch	791: 0.003
Loss after mini-batch	801: 0.004
Loss after mini-batch	811: 0.003
Loss after mini-batch	821: 0.005

Loss after mini-batch	831: 0.004
Loss after mini-batch	841: 0.003
Loss after mini-batch	851: 0.004
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.005
Loss after mini-batch	881: 0.005
Loss after mini-batch	891: 0.005
Loss after mini-batch	901: 0.004
Loss after mini-batch	911: 0.003
Loss after mini-batch	921: 0.004
Loss after mini-batch	931: 0.005
Loss after mini-batch	941: 0.003
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.003
Loss after mini-batch	971: 0.003
Loss after mini-batch	981: 0.002
Loss after mini-batch	991: 0.002
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.005
Loss after mini-batch	1021: 0.002
Loss after mini-batch	1031: 0.003
Loss after mini-batch	1041: 0.005
Loss after mini-batch	1051: 0.006
Loss after mini-batch	1061: 0.003
Loss after mini-batch	1071: 0.002
Loss after mini-batch	1081: 0.004
Loss after mini-batch	1091: 0.002
Loss after mini-batch	1101: 0.002
Loss after mini-batch	1111: 0.003
Loss after mini-batch	1121: 0.003
Loss after mini-batch	1131: 0.003
Loss after mini-batch	1141: 0.002
Loss after mini-batch	1151: 0.002
Loss after mini-batch	1161: 0.003
Loss after mini-batch	1171: 0.003
Loss after mini-batch	1181: 0.003
Loss after mini-batch	1191: 0.003
Loss after mini-batch	1201: 0.005
Loss after mini-batch	1211: 0.003
Loss after mini-batch	1221: 0.003
Loss after mini-batch	1231: 0.004
Loss after mini-batch	1241: 0.004
Loss after mini-batch	1251: 0.006
Loss after mini-batch	1261: 0.004
Loss after mini-batch	1271: 0.004
Loss after mini-batch	1281: 0.004
Loss after mini-batch	1291: 0.003
Loss after mini-batch	1301: 0.003

Loss after mini-batch	1311:	0.002
Loss after mini-batch	1321:	0.003
Loss after mini-batch	1331:	0.004
Loss after mini-batch	1341:	0.003
Loss after mini-batch	1351:	0.003
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.004
Loss after mini-batch	1401:	0.005
Loss after mini-batch	1411:	0.005
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.006
Loss after mini-batch	1441:	0.004
Loss after mini-batch	1451:	0.003
Loss after mini-batch	1461:	0.004
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.003
Loss after mini-batch	1491:	0.003
Loss after mini-batch	1501:	0.004
Loss after mini-batch	1511:	0.003
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.003
Loss after mini-batch	1541:	0.004
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.003
Loss after mini-batch	1591:	0.003
Loss after mini-batch	1601:	0.004
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.004
Loss after mini-batch	1631:	0.004
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.004
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.003
Loss after mini-batch	1691:	0.005
Loss after mini-batch	1701:	0.003
Loss after mini-batch	1711:	0.004
Loss after mini-batch	1721:	0.003
Loss after mini-batch	1731:	0.003
Loss after mini-batch	1741:	0.003
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.003
Loss after mini-batch	1781:	0.001

Loss after mini-batch	1791:	0.003
Loss after mini-batch	1801:	0.003
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.003
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.003
Loss after mini-batch	1851:	0.003
Loss after mini-batch	1861:	0.004
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.003
Loss after mini-batch	1891:	0.002
Loss after mini-batch	1901:	0.003
Loss after mini-batch	1911:	0.009
Loss after mini-batch	1921:	0.003
Loss after mini-batch	1931:	0.005
Loss after mini-batch	1941:	0.004
Loss after mini-batch	1951:	0.004
Loss after mini-batch	1961:	0.003
Loss after mini-batch	1971:	0.003
Loss after mini-batch	1981:	0.003
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.004
Loss after mini-batch	2011:	0.004
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.003
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.003
Loss after mini-batch	2061:	0.003
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.003
Loss after mini-batch	2111:	0.003
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.004
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.003
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.003
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.003

Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.003
Loss after mini-batch	2291:	0.003
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.003
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.003
Loss after mini-batch	2431:	0.002
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.002
Loss after mini-batch	2461:	0.002
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.002
Loss after mini-batch	2491:	0.003
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.003
Loss after mini-batch	2521:	0.005
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.003
Loss after mini-batch	2551:	0.004
Loss after mini-batch	2561:	0.002
Loss after mini-batch	2571:	0.004
Loss after mini-batch	2581:	0.002
Loss after mini-batch	2591:	0.002
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.002
Loss after mini-batch	2641:	0.002
Loss after mini-batch	2651:	0.002
Loss after mini-batch	2661:	0.002
Loss after mini-batch	2671:	0.003
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.003
Loss after mini-batch	2701:	0.002
Loss after mini-batch	2711:	0.002
Loss after mini-batch	2721:	0.003
Loss after mini-batch	2731:	0.002
Loss after mini-batch	2741:	0.002

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Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.003
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.003
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.003
Starting epoch 2
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.002
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.003
Loss after mini-batch     61: 0.002
Loss after mini-batch     71: 0.004
Loss after mini-batch     81: 0.003
Loss after mini-batch     91: 0.002
Loss after mini-batch    101: 0.002
Loss after mini-batch    111: 0.002
Loss after mini-batch    121: 0.002
Loss after mini-batch    131: 0.002
Loss after mini-batch    141: 0.003
Loss after mini-batch    151: 0.003
Loss after mini-batch    161: 0.003
Loss after mini-batch    171: 0.002
Loss after mini-batch    181: 0.003
Loss after mini-batch    191: 0.003
Loss after mini-batch    201: 0.002
Loss after mini-batch    211: 0.003
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.002
Loss after mini-batch    241: 0.002
Loss after mini-batch    251: 0.003
Loss after mini-batch    261: 0.002
Loss after mini-batch    271: 0.002
Loss after mini-batch    281: 0.002
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.002
Loss after mini-batch    311: 0.002
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.002
Loss after mini-batch    341: 0.002
Loss after mini-batch    351: 0.002
Loss after mini-batch    361: 0.003
Loss after mini-batch    371: 0.003
Loss after mini-batch    381: 0.003
Loss after mini-batch    391: 0.003

```

Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.003
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.002
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.003
Loss after mini-batch	521: 0.004
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.005
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.006
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.003
Loss after mini-batch	611: 0.003
Loss after mini-batch	621: 0.004
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.003
Loss after mini-batch	661: 0.003
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.004
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.003
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.003
Loss after mini-batch	821: 0.002
Loss after mini-batch	831: 0.002
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.003
Loss after mini-batch	861: 0.003
Loss after mini-batch	871: 0.004

Loss after mini-batch	881: 0.004
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.004
Loss after mini-batch	951: 0.003
Loss after mini-batch	961: 0.002
Loss after mini-batch	971: 0.002
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.003
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.003
Loss after mini-batch	1051: 0.003
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.003
Loss after mini-batch	1081: 0.002
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.002
Loss after mini-batch	1121: 0.002
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.002
Loss after mini-batch	1161: 0.002
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.002
Loss after mini-batch	1201: 0.002
Loss after mini-batch	1211: 0.002
Loss after mini-batch	1221: 0.004
Loss after mini-batch	1231: 0.002
Loss after mini-batch	1241: 0.003
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.002
Loss after mini-batch	1271: 0.003
Loss after mini-batch	1281: 0.004
Loss after mini-batch	1291: 0.002
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.001
Loss after mini-batch	1321: 0.003
Loss after mini-batch	1331: 0.001
Loss after mini-batch	1341: 0.002
Loss after mini-batch	1351: 0.002

Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.003
Loss after mini-batch	1381:	0.004
Loss after mini-batch	1391:	0.004
Loss after mini-batch	1401:	0.003
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.003
Loss after mini-batch	1451:	0.003
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.003
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.003
Loss after mini-batch	1661:	0.004
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.003
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.004
Loss after mini-batch	1721:	0.004
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.003
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.002
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.003

Loss after mini-batch	1841:	0.003
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.003
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.003
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.004
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.003
Loss after mini-batch	1981:	0.002
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.003
Loss after mini-batch	2051:	0.004
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.003
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.003
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.003
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.003
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.002

Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.003
Loss after mini-batch	2341:	0.003
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.002
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.002
Loss after mini-batch	2491:	0.003
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.003
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.002
Loss after mini-batch	2561:	0.002
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.002
Loss after mini-batch	2591:	0.002
Loss after mini-batch	2601:	0.002
Loss after mini-batch	2611:	0.002
Loss after mini-batch	2621:	0.002
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.002
Loss after mini-batch	2651:	0.002
Loss after mini-batch	2661:	0.003
Loss after mini-batch	2671:	0.002
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.002
Loss after mini-batch	2701:	0.002
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.002
Loss after mini-batch	2731:	0.002
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001
Loss after mini-batch	2761:	0.004
Loss after mini-batch	2771:	0.002
Loss after mini-batch	2781:	0.002
Loss after mini-batch	2791:	0.003

```
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.002
Starting epoch 3
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.002
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.002
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.002
Loss after mini-batch    121: 0.002
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.002
Loss after mini-batch    151: 0.002
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.002
Loss after mini-batch    231: 0.002
Loss after mini-batch    241: 0.004
Loss after mini-batch    251: 0.003
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.002
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.002
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.002
Loss after mini-batch    341: 0.002
Loss after mini-batch    351: 0.003
Loss after mini-batch    361: 0.005
Loss after mini-batch    371: 0.003
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.002
Loss after mini-batch    401: 0.002
Loss after mini-batch    411: 0.002
Loss after mini-batch    421: 0.002
Loss after mini-batch    431: 0.001
Loss after mini-batch    441: 0.002
```

Loss after mini-batch	451: 0.003
Loss after mini-batch	461: 0.002
Loss after mini-batch	471: 0.004
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.003
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.003
Loss after mini-batch	581: 0.003
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.004
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.003
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.003
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.002
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.003

Loss after mini-batch	931:	0.002
Loss after mini-batch	941:	0.002
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.002
Loss after mini-batch	971:	0.004
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.002
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.002
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.002
Loss after mini-batch	1041:	0.002
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.002
Loss after mini-batch	1071:	0.003
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.002
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.002
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.003
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.003
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.002
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.003
Loss after mini-batch	1251:	0.002
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.002

Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.003
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.003
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002

Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.003
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.003
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.003
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.002
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001

```

Loss after mini-batch 2371: 0.002
Loss after mini-batch 2381: 0.002
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.001
Loss after mini-batch 2421: 0.003
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.002
Loss after mini-batch 2451: 0.004
Loss after mini-batch 2461: 0.002
Loss after mini-batch 2471: 0.002
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.002
Loss after mini-batch 2501: 0.002
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.002
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.002
Loss after mini-batch 2641: 0.003
Loss after mini-batch 2651: 0.003
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 4
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001

```

Loss after mini-batch	21: 0.002
Loss after mini-batch	31: 0.001
Loss after mini-batch	41: 0.002
Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.003
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.002
Loss after mini-batch	101: 0.002
Loss after mini-batch	111: 0.003
Loss after mini-batch	121: 0.002
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.002
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.003
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.003
Loss after mini-batch	251: 0.002
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002

Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.003
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.002
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.002
Loss after mini-batch	971: 0.002

Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.002
Loss after mini-batch	1021:	0.002
Loss after mini-batch	1031:	0.003
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.000
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.002
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.002
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001

Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.003
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.003
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001

Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.003
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001

```

Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.002
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.000
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.002
Starting epoch 5
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.002

```


Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.002
Loss after mini-batch	181: 0.002
Loss after mini-batch	191: 0.002
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.002
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.002
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001

Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.004
Loss after mini-batch	781: 0.003
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.002
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.002

Loss after mini-batch	1031:	0.002
Loss after mini-batch	1041:	0.002
Loss after mini-batch	1051:	0.002
Loss after mini-batch	1061:	0.002
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.002
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.000
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.003
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.002
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.002
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001

Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.003
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.002
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001

Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.004
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.003
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.002
Loss after mini-batch	2461:	0.002

```

Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.002
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.000
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 6
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.000
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.001
Loss after mini-batch 81: 0.001
Loss after mini-batch 91: 0.001
Loss after mini-batch 101: 0.001
Loss after mini-batch 111: 0.001

```

Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.002
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.003
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.002
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.004
Loss after mini-batch	491: 0.003
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001

Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.000
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.002
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.002
Loss after mini-batch	981: 0.003
Loss after mini-batch	991: 0.003
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.002

Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.000
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.000
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001

Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.003
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001

Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.003
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.002

```

Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.000
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.002
Loss after mini-batch 2631: 0.002
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.000
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 7
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.002
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.002

```

Loss after mini-batch	171: 0.002
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.002
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001

Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.000
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.000
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.000

Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.000
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001

Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001

Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.000
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.000

```

Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 8
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.003
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.001
Loss after mini-batch 81: 0.001
Loss after mini-batch 91: 0.000
Loss after mini-batch 101: 0.001
Loss after mini-batch 111: 0.001
Loss after mini-batch 121: 0.001
Loss after mini-batch 131: 0.002
Loss after mini-batch 141: 0.001
Loss after mini-batch 151: 0.001
Loss after mini-batch 161: 0.001
Loss after mini-batch 171: 0.001
Loss after mini-batch 181: 0.001
Loss after mini-batch 191: 0.001
Loss after mini-batch 201: 0.001
Loss after mini-batch 211: 0.001

```

Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.000
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.000
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.003
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.003

Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.002
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.000
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.000
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.002
Loss after mini-batch	1141: 0.000
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001

Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.003
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.003
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001

Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001

Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.003
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.000
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.003
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001

```

Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.000
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 9
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.000
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.000
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001

```


Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.003
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001

Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.002
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.000
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.002
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.000
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.002

Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001

Loss after mini-batch	1711:	0.003
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000

Loss after mini-batch	2191:	0.002
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.000
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.000
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.002
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001

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Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 10
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.002
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.002
Loss after mini-batch    231: 0.002
Loss after mini-batch    241: 0.002
Loss after mini-batch    251: 0.004
Loss after mini-batch    261: 0.002
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.003
Loss after mini-batch    291: 0.002
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001

```

Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.002
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.003
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000

Loss after mini-batch	801:	0.002
Loss after mini-batch	811:	0.001
Loss after mini-batch	821:	0.001
Loss after mini-batch	831:	0.000
Loss after mini-batch	841:	0.001
Loss after mini-batch	851:	0.001
Loss after mini-batch	861:	0.001
Loss after mini-batch	871:	0.001
Loss after mini-batch	881:	0.000
Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.003
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.000
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001

Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001

Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.002
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.003
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001

Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.003
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.002
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.002
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001

```

Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.002
Starting epoch 11
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.002
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.003
Loss after mini-batch    151: 0.002
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.000
Loss after mini-batch    181: 0.002
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.000
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.000
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.002
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001

```

Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001

Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.002
Loss after mini-batch	991: 0.002
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.002
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.000
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.000
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.000
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.001
Loss after mini-batch	1291: 0.001
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.002
Loss after mini-batch	1321: 0.001

Loss after mini-batch 1331: 0.000
Loss after mini-batch 1341: 0.001
Loss after mini-batch 1351: 0.002
Loss after mini-batch 1361: 0.001
Loss after mini-batch 1371: 0.001
Loss after mini-batch 1381: 0.001
Loss after mini-batch 1391: 0.000
Loss after mini-batch 1401: 0.001
Loss after mini-batch 1411: 0.001
Loss after mini-batch 1421: 0.001
Loss after mini-batch 1431: 0.002
Loss after mini-batch 1441: 0.001
Loss after mini-batch 1451: 0.001
Loss after mini-batch 1461: 0.002
Loss after mini-batch 1471: 0.002
Loss after mini-batch 1481: 0.002
Loss after mini-batch 1491: 0.002
Loss after mini-batch 1501: 0.001
Loss after mini-batch 1511: 0.000
Loss after mini-batch 1521: 0.001
Loss after mini-batch 1531: 0.001
Loss after mini-batch 1541: 0.001
Loss after mini-batch 1551: 0.001
Loss after mini-batch 1561: 0.001
Loss after mini-batch 1571: 0.001
Loss after mini-batch 1581: 0.001
Loss after mini-batch 1591: 0.000
Loss after mini-batch 1601: 0.001
Loss after mini-batch 1611: 0.001
Loss after mini-batch 1621: 0.001
Loss after mini-batch 1631: 0.001
Loss after mini-batch 1641: 0.001
Loss after mini-batch 1651: 0.001
Loss after mini-batch 1661: 0.001
Loss after mini-batch 1671: 0.001
Loss after mini-batch 1681: 0.001
Loss after mini-batch 1691: 0.001
Loss after mini-batch 1701: 0.001
Loss after mini-batch 1711: 0.001
Loss after mini-batch 1721: 0.001
Loss after mini-batch 1731: 0.003
Loss after mini-batch 1741: 0.002
Loss after mini-batch 1751: 0.001
Loss after mini-batch 1761: 0.001
Loss after mini-batch 1771: 0.001
Loss after mini-batch 1781: 0.001
Loss after mini-batch 1791: 0.001
Loss after mini-batch 1801: 0.001

Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.003
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001

Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.002
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.002
Loss after mini-batch	2711:	0.000
Loss after mini-batch	2721:	0.000
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001
Loss after mini-batch	2761:	0.001

```

Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 12
Loss after mini-batch      1: 0.001
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.002
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.000
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.002
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.001
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.001
Loss after mini-batch    401: 0.001
Loss after mini-batch    411: 0.001

```

Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001

Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.000
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.000
Loss after mini-batch	1081:	0.002
Loss after mini-batch	1091:	0.003
Loss after mini-batch	1101:	0.003
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.003
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.000
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.002
Loss after mini-batch	1321:	0.002
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.001

Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.003
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001

Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.000

Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.000
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.000
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.000
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.002
Loss after mini-batch	2641:	0.002
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.002
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.003
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001
Loss after mini-batch	2761:	0.001
Loss after mini-batch	2771:	0.001
Loss after mini-batch	2781:	0.001
Loss after mini-batch	2791:	0.000
Loss after mini-batch	2801:	0.001
Loss after mini-batch	2811:	0.001

Starting epoch 13

Loss after mini-batch	1:	0.000
Loss after mini-batch	11:	0.001
Loss after mini-batch	21:	0.002
Loss after mini-batch	31:	0.001
Loss after mini-batch	41:	0.001
Loss after mini-batch	51:	0.002
Loss after mini-batch	61:	0.001
Loss after mini-batch	71:	0.001
Loss after mini-batch	81:	0.000
Loss after mini-batch	91:	0.000
Loss after mini-batch	101:	0.001
Loss after mini-batch	111:	0.001
Loss after mini-batch	121:	0.001
Loss after mini-batch	131:	0.001
Loss after mini-batch	141:	0.001
Loss after mini-batch	151:	0.001
Loss after mini-batch	161:	0.001
Loss after mini-batch	171:	0.001
Loss after mini-batch	181:	0.001
Loss after mini-batch	191:	0.001
Loss after mini-batch	201:	0.002
Loss after mini-batch	211:	0.001
Loss after mini-batch	221:	0.001
Loss after mini-batch	231:	0.001
Loss after mini-batch	241:	0.002
Loss after mini-batch	251:	0.000
Loss after mini-batch	261:	0.000
Loss after mini-batch	271:	0.000
Loss after mini-batch	281:	0.001
Loss after mini-batch	291:	0.002
Loss after mini-batch	301:	0.002
Loss after mini-batch	311:	0.001
Loss after mini-batch	321:	0.001
Loss after mini-batch	331:	0.001
Loss after mini-batch	341:	0.001
Loss after mini-batch	351:	0.001
Loss after mini-batch	361:	0.000
Loss after mini-batch	371:	0.001
Loss after mini-batch	381:	0.001
Loss after mini-batch	391:	0.001
Loss after mini-batch	401:	0.001
Loss after mini-batch	411:	0.001
Loss after mini-batch	421:	0.001
Loss after mini-batch	431:	0.001
Loss after mini-batch	441:	0.001
Loss after mini-batch	451:	0.002
Loss after mini-batch	461:	0.001

Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.000
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.003
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000

Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.002
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.000
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.000
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.000
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.000
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.001

Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.003
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001

Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000

```

Loss after mini-batch 2391: 0.000
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.000
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.002
Loss after mini-batch 2561: 0.003
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.000
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.002
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 14
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001

```

Loss after mini-batch	41: 0.001
Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.001
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.002
Loss after mini-batch	91: 0.000
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.002
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.002
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.002
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000

Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.003
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001

Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.000
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.002
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.001

Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001

Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001

```

Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.000
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.000
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.000
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 15
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000

```

Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.000
Loss after mini-batch	211: 0.000
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.000
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001

Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.000
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.002
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.000
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.000
Loss after mini-batch	1041: 0.002

Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.000
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.001

Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.002
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.002
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.001

Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.000

Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.000
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.000
Loss after mini-batch 2651: 0.000
Loss after mini-batch 2661: 0.000
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Training process has finished.

Calculate error for test

Result: 1.0995086988557976e-05

Result: 9.972341754381332e-16

Result: 1.719939080727756e-07

Calculate error for train

Result: 1.0599116096144169e-05

Result: 9.641282600677242e-16

Result: 1.704618137662063e-07

Training with 20 epochs.

Starting epoch 1

Loss after mini-batch 1: 0.222

Loss after mini-batch 11: 2.189

Loss after mini-batch 21: 1.865

Loss after mini-batch	31: 1.496
Loss after mini-batch	41: 1.076
Loss after mini-batch	51: 0.741
Loss after mini-batch	61: 0.426
Loss after mini-batch	71: 0.205
Loss after mini-batch	81: 0.075
Loss after mini-batch	91: 0.015
Loss after mini-batch	101: 0.009
Loss after mini-batch	111: 0.012
Loss after mini-batch	121: 0.010
Loss after mini-batch	131: 0.006
Loss after mini-batch	141: 0.007
Loss after mini-batch	151: 0.007
Loss after mini-batch	161: 0.007
Loss after mini-batch	171: 0.005
Loss after mini-batch	181: 0.008
Loss after mini-batch	191: 0.005
Loss after mini-batch	201: 0.004
Loss after mini-batch	211: 0.005
Loss after mini-batch	221: 0.005
Loss after mini-batch	231: 0.005
Loss after mini-batch	241: 0.005
Loss after mini-batch	251: 0.008
Loss after mini-batch	261: 0.006
Loss after mini-batch	271: 0.004
Loss after mini-batch	281: 0.003
Loss after mini-batch	291: 0.005
Loss after mini-batch	301: 0.005
Loss after mini-batch	311: 0.003
Loss after mini-batch	321: 0.005
Loss after mini-batch	331: 0.005
Loss after mini-batch	341: 0.005
Loss after mini-batch	351: 0.005
Loss after mini-batch	361: 0.006
Loss after mini-batch	371: 0.004
Loss after mini-batch	381: 0.005
Loss after mini-batch	391: 0.005
Loss after mini-batch	401: 0.006
Loss after mini-batch	411: 0.005
Loss after mini-batch	421: 0.005
Loss after mini-batch	431: 0.005
Loss after mini-batch	441: 0.006
Loss after mini-batch	451: 0.004
Loss after mini-batch	461: 0.003
Loss after mini-batch	471: 0.005
Loss after mini-batch	481: 0.005
Loss after mini-batch	491: 0.004
Loss after mini-batch	501: 0.004

Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.004
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.004
Loss after mini-batch	551: 0.003
Loss after mini-batch	561: 0.004
Loss after mini-batch	571: 0.004
Loss after mini-batch	581: 0.003
Loss after mini-batch	591: 0.007
Loss after mini-batch	601: 0.004
Loss after mini-batch	611: 0.005
Loss after mini-batch	621: 0.004
Loss after mini-batch	631: 0.006
Loss after mini-batch	641: 0.003
Loss after mini-batch	651: 0.004
Loss after mini-batch	661: 0.003
Loss after mini-batch	671: 0.004
Loss after mini-batch	681: 0.003
Loss after mini-batch	691: 0.004
Loss after mini-batch	701: 0.003
Loss after mini-batch	711: 0.007
Loss after mini-batch	721: 0.005
Loss after mini-batch	731: 0.004
Loss after mini-batch	741: 0.003
Loss after mini-batch	751: 0.005
Loss after mini-batch	761: 0.004
Loss after mini-batch	771: 0.005
Loss after mini-batch	781: 0.005
Loss after mini-batch	791: 0.004
Loss after mini-batch	801: 0.003
Loss after mini-batch	811: 0.003
Loss after mini-batch	821: 0.003
Loss after mini-batch	831: 0.003
Loss after mini-batch	841: 0.004
Loss after mini-batch	851: 0.006
Loss after mini-batch	861: 0.004
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.005
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.003
Loss after mini-batch	911: 0.003
Loss after mini-batch	921: 0.004
Loss after mini-batch	931: 0.006
Loss after mini-batch	941: 0.004
Loss after mini-batch	951: 0.003
Loss after mini-batch	961: 0.003
Loss after mini-batch	971: 0.003
Loss after mini-batch	981: 0.002

Loss after mini-batch	991:	0.003
Loss after mini-batch	1001:	0.003
Loss after mini-batch	1011:	0.003
Loss after mini-batch	1021:	0.003
Loss after mini-batch	1031:	0.005
Loss after mini-batch	1041:	0.003
Loss after mini-batch	1051:	0.003
Loss after mini-batch	1061:	0.003
Loss after mini-batch	1071:	0.003
Loss after mini-batch	1081:	0.004
Loss after mini-batch	1091:	0.004
Loss after mini-batch	1101:	0.004
Loss after mini-batch	1111:	0.003
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.004
Loss after mini-batch	1141:	0.004
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.004
Loss after mini-batch	1171:	0.004
Loss after mini-batch	1181:	0.003
Loss after mini-batch	1191:	0.004
Loss after mini-batch	1201:	0.004
Loss after mini-batch	1211:	0.005
Loss after mini-batch	1221:	0.004
Loss after mini-batch	1231:	0.003
Loss after mini-batch	1241:	0.006
Loss after mini-batch	1251:	0.004
Loss after mini-batch	1261:	0.003
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.004
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.004
Loss after mini-batch	1321:	0.003
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.003
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.005
Loss after mini-batch	1381:	0.003
Loss after mini-batch	1391:	0.004
Loss after mini-batch	1401:	0.004
Loss after mini-batch	1411:	0.004
Loss after mini-batch	1421:	0.004
Loss after mini-batch	1431:	0.003
Loss after mini-batch	1441:	0.003
Loss after mini-batch	1451:	0.003
Loss after mini-batch	1461:	0.004

Loss after mini-batch	1471:	0.003
Loss after mini-batch	1481:	0.003
Loss after mini-batch	1491:	0.003
Loss after mini-batch	1501:	0.003
Loss after mini-batch	1511:	0.005
Loss after mini-batch	1521:	0.005
Loss after mini-batch	1531:	0.003
Loss after mini-batch	1541:	0.003
Loss after mini-batch	1551:	0.004
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.003
Loss after mini-batch	1591:	0.003
Loss after mini-batch	1601:	0.003
Loss after mini-batch	1611:	0.003
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.003
Loss after mini-batch	1651:	0.003
Loss after mini-batch	1661:	0.003
Loss after mini-batch	1671:	0.003
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.003
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.004
Loss after mini-batch	1741:	0.004
Loss after mini-batch	1751:	0.004
Loss after mini-batch	1761:	0.003
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.003
Loss after mini-batch	1801:	0.004
Loss after mini-batch	1811:	0.003
Loss after mini-batch	1821:	0.003
Loss after mini-batch	1831:	0.003
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.003
Loss after mini-batch	1871:	0.004
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.004
Loss after mini-batch	1901:	0.003
Loss after mini-batch	1911:	0.004
Loss after mini-batch	1921:	0.003
Loss after mini-batch	1931:	0.004
Loss after mini-batch	1941:	0.002

Loss after mini-batch	1951:	0.004
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.003
Loss after mini-batch	1981:	0.002
Loss after mini-batch	1991:	0.003
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.003
Loss after mini-batch	2041:	0.003
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.003
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.003
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.004
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.003
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.004
Loss after mini-batch	2191:	0.002
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.003
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.003
Loss after mini-batch	2291:	0.004
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.004
Loss after mini-batch	2351:	0.004
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.003
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.004
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.002

```

Loss after mini-batch 2431: 0.003
Loss after mini-batch 2441: 0.002
Loss after mini-batch 2451: 0.004
Loss after mini-batch 2461: 0.003
Loss after mini-batch 2471: 0.002
Loss after mini-batch 2481: 0.002
Loss after mini-batch 2491: 0.002
Loss after mini-batch 2501: 0.003
Loss after mini-batch 2511: 0.002
Loss after mini-batch 2521: 0.002
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.002
Loss after mini-batch 2551: 0.003
Loss after mini-batch 2561: 0.003
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.003
Loss after mini-batch 2621: 0.003
Loss after mini-batch 2631: 0.003
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.004
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.003
Loss after mini-batch 2711: 0.003
Loss after mini-batch 2721: 0.003
Loss after mini-batch 2731: 0.003
Loss after mini-batch 2741: 0.004
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.003
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.003
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.003
Starting epoch 2
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.003
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.003
Loss after mini-batch     41: 0.003
Loss after mini-batch     51: 0.003
Loss after mini-batch     61: 0.003
Loss after mini-batch     71: 0.002

```

Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.003
Loss after mini-batch	111: 0.003
Loss after mini-batch	121: 0.002
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.003
Loss after mini-batch	151: 0.002
Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.002
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.004
Loss after mini-batch	201: 0.002
Loss after mini-batch	211: 0.003
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.003
Loss after mini-batch	241: 0.002
Loss after mini-batch	251: 0.002
Loss after mini-batch	261: 0.003
Loss after mini-batch	271: 0.002
Loss after mini-batch	281: 0.003
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.003
Loss after mini-batch	311: 0.005
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.002
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.002
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.002
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.003
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.003
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.002

Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.003
Loss after mini-batch	651: 0.003
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.006
Loss after mini-batch	711: 0.003
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.004
Loss after mini-batch	741: 0.003
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.002
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.002
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.003
Loss after mini-batch	931: 0.003
Loss after mini-batch	941: 0.003
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.002
Loss after mini-batch	971: 0.002
Loss after mini-batch	981: 0.002
Loss after mini-batch	991: 0.003
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001

Loss after mini-batch	1041:	0.002
Loss after mini-batch	1051:	0.002
Loss after mini-batch	1061:	0.002
Loss after mini-batch	1071:	0.002
Loss after mini-batch	1081:	0.002
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.003
Loss after mini-batch	1121:	0.003
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.002
Loss after mini-batch	1201:	0.003
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.003
Loss after mini-batch	1261:	0.003
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.003
Loss after mini-batch	1311:	0.003
Loss after mini-batch	1321:	0.003
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.005
Loss after mini-batch	1371:	0.003
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.003
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.003
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.003
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.004
Loss after mini-batch	1511:	0.002

Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.003
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.003
Loss after mini-batch	1621:	0.003
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.003
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.003
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.004
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.003
Loss after mini-batch	1981:	0.003
Loss after mini-batch	1991:	0.002

Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.003
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.003
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.003
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.002
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.004
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.002
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.004
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.002
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001

```

Loss after mini-batch 2481: 0.003
Loss after mini-batch 2491: 0.002
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.002
Loss after mini-batch 2531: 0.002
Loss after mini-batch 2541: 0.002
Loss after mini-batch 2551: 0.002
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.002
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.002
Loss after mini-batch 2621: 0.003
Loss after mini-batch 2631: 0.003
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.002
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.003
Starting epoch 3
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.002
Loss after mini-batch     71: 0.002
Loss after mini-batch     81: 0.003
Loss after mini-batch     91: 0.002
Loss after mini-batch    101: 0.002
Loss after mini-batch    111: 0.002
Loss after mini-batch    121: 0.001

```

Loss after mini-batch	131: 0.004
Loss after mini-batch	141: 0.002
Loss after mini-batch	151: 0.002
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.002
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.002
Loss after mini-batch	241: 0.002
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.002
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.002
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.003
Loss after mini-batch	461: 0.003
Loss after mini-batch	471: 0.004
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.004
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.003
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.002

Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.004
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.004
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.003
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.003
Loss after mini-batch	801: 0.003
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.002
Loss after mini-batch	831: 0.002
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.004
Loss after mini-batch	861: 0.003
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.002
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.002
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.002
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.002
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.002
Loss after mini-batch	1051: 0.002
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.002

Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.003
Loss after mini-batch	1151:	0.003
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.002
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.002
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.003
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.003
Loss after mini-batch	1311:	0.003
Loss after mini-batch	1321:	0.002
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.003
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.003
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.002

Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.003
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.003
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.002
Loss after mini-batch	1901:	0.003
Loss after mini-batch	1911:	0.003
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.002

Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.003
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.003
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.004
Loss after mini-batch	2201:	0.003
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.003
Loss after mini-batch	2351:	0.004
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.003
Loss after mini-batch	2461:	0.002
Loss after mini-batch	2471:	0.002
Loss after mini-batch	2481:	0.002
Loss after mini-batch	2491:	0.003
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.002
Loss after mini-batch	2521:	0.002

```

Loss after mini-batch 2531: 0.003
Loss after mini-batch 2541: 0.002
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.002
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.002
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.003
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.003
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.003
Loss after mini-batch 2811: 0.002
Starting epoch 4
Loss after mini-batch      1: 0.001
Loss after mini-batch     11: 0.003
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.002
Loss after mini-batch    151: 0.002
Loss after mini-batch    161: 0.002
Loss after mini-batch    171: 0.003

```

Loss after mini-batch	181: 0.003
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.002
Loss after mini-batch	211: 0.003
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.002
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.002
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.003
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.002
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.003
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.003
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002

Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.003
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.002
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.002
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.002
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.000
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.002
Loss after mini-batch	1131: 0.001

Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.002
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.002
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.003
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.001

Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.003
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001

Loss after mini-batch	2101:	0.003
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.003
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.003
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.002
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001


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Loss after mini-batch 2581: 0.000
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.002
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 5
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.003
Loss after mini-batch     41: 0.003
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.002
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.002
Loss after mini-batch    221: 0.002

```

Loss after mini-batch	231: 0.002
Loss after mini-batch	241: 0.002
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.002
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.003
Loss after mini-batch	381: 0.002
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001

Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.003
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.000
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.002
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001

Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001

Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.003
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001

Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.002
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.002
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.002
Loss after mini-batch	2571:	0.002
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001

```

Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.003
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.002
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 6
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.002
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.002
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.002
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001

```

Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.000
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001

Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.002
Loss after mini-batch	971: 0.003
Loss after mini-batch	981: 0.003
Loss after mini-batch	991: 0.003
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.000
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.002
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.002
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.002

Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.002
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000

Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001

Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.000
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.002
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.000
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001

```

Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 7
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.002
Loss after mini-batch    141: 0.002
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.002
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.002
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.000
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.002
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.003
Loss after mini-batch    311: 0.002
Loss after mini-batch    321: 0.001

```

Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001

Loss after mini-batch	811: 0.002
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.002
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.002
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.002
Loss after mini-batch	1031: 0.002
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.002
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.000
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.002
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.000
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.001

Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.003
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001

Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001

Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.000
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.000
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.002
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.003
Loss after mini-batch	2541:	0.002
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.000
Loss after mini-batch	2601:	0.000
Loss after mini-batch	2611:	0.002
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.000
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001

```

Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 8
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.000
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.002
Loss after mini-batch    201: 0.002
Loss after mini-batch    211: 0.002
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.002
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.000
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.001

```

Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.002
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001

Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.000
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.002
Loss after mini-batch	1141: 0.002
Loss after mini-batch	1151: 0.002
Loss after mini-batch	1161: 0.002
Loss after mini-batch	1171: 0.002
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.001
Loss after mini-batch	1291: 0.001
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.000
Loss after mini-batch	1321: 0.001
Loss after mini-batch	1331: 0.003

Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.002

Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.003
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001

Loss after mini-batch 2301: 0.001
Loss after mini-batch 2311: 0.001
Loss after mini-batch 2321: 0.001
Loss after mini-batch 2331: 0.001
Loss after mini-batch 2341: 0.001
Loss after mini-batch 2351: 0.003
Loss after mini-batch 2361: 0.001
Loss after mini-batch 2371: 0.001
Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.001
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.000
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.000
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.002
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.000
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001


```

Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 9
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.001
Loss after mini-batch 61: 0.002
Loss after mini-batch 71: 0.001
Loss after mini-batch 81: 0.001
Loss after mini-batch 91: 0.001
Loss after mini-batch 101: 0.001
Loss after mini-batch 111: 0.001
Loss after mini-batch 121: 0.001
Loss after mini-batch 131: 0.001
Loss after mini-batch 141: 0.000
Loss after mini-batch 151: 0.000
Loss after mini-batch 161: 0.001
Loss after mini-batch 171: 0.002
Loss after mini-batch 181: 0.001
Loss after mini-batch 191: 0.001
Loss after mini-batch 201: 0.001
Loss after mini-batch 211: 0.001
Loss after mini-batch 221: 0.001
Loss after mini-batch 231: 0.000
Loss after mini-batch 241: 0.000
Loss after mini-batch 251: 0.001
Loss after mini-batch 261: 0.001
Loss after mini-batch 271: 0.001
Loss after mini-batch 281: 0.001
Loss after mini-batch 291: 0.001
Loss after mini-batch 301: 0.001
Loss after mini-batch 311: 0.001
Loss after mini-batch 321: 0.001
Loss after mini-batch 331: 0.001
Loss after mini-batch 341: 0.000
Loss after mini-batch 351: 0.001
Loss after mini-batch 361: 0.001
Loss after mini-batch 371: 0.001
Loss after mini-batch 381: 0.001
Loss after mini-batch 391: 0.001
Loss after mini-batch 401: 0.001
Loss after mini-batch 411: 0.001
Loss after mini-batch 421: 0.001

```

Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.000
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.002
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001

Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.002
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.000
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001

Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.004
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001

Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001

Loss after mini-batch 2351: 0.002
Loss after mini-batch 2361: 0.001
Loss after mini-batch 2371: 0.001
Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.002
Loss after mini-batch 2411: 0.002
Loss after mini-batch 2421: 0.002
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.000
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.000
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.000
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.003
Loss after mini-batch 2611: 0.002
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.000
Starting epoch 10

Loss after mini-batch	1:	0.000
Loss after mini-batch	11:	0.001
Loss after mini-batch	21:	0.000
Loss after mini-batch	31:	0.001
Loss after mini-batch	41:	0.001
Loss after mini-batch	51:	0.001
Loss after mini-batch	61:	0.001
Loss after mini-batch	71:	0.000
Loss after mini-batch	81:	0.001
Loss after mini-batch	91:	0.001
Loss after mini-batch	101:	0.001
Loss after mini-batch	111:	0.001
Loss after mini-batch	121:	0.001
Loss after mini-batch	131:	0.001
Loss after mini-batch	141:	0.001
Loss after mini-batch	151:	0.001
Loss after mini-batch	161:	0.001
Loss after mini-batch	171:	0.001
Loss after mini-batch	181:	0.001
Loss after mini-batch	191:	0.001
Loss after mini-batch	201:	0.001
Loss after mini-batch	211:	0.003
Loss after mini-batch	221:	0.001
Loss after mini-batch	231:	0.001
Loss after mini-batch	241:	0.001
Loss after mini-batch	251:	0.001
Loss after mini-batch	261:	0.001
Loss after mini-batch	271:	0.000
Loss after mini-batch	281:	0.001
Loss after mini-batch	291:	0.001
Loss after mini-batch	301:	0.001
Loss after mini-batch	311:	0.001
Loss after mini-batch	321:	0.001
Loss after mini-batch	331:	0.001
Loss after mini-batch	341:	0.000
Loss after mini-batch	351:	0.001
Loss after mini-batch	361:	0.001
Loss after mini-batch	371:	0.001
Loss after mini-batch	381:	0.002
Loss after mini-batch	391:	0.002
Loss after mini-batch	401:	0.001
Loss after mini-batch	411:	0.001
Loss after mini-batch	421:	0.001
Loss after mini-batch	431:	0.001
Loss after mini-batch	441:	0.001
Loss after mini-batch	451:	0.002
Loss after mini-batch	461:	0.001
Loss after mini-batch	471:	0.001

Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.000
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001

Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.000
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.000
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001

Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001

Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.003
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002

```

Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.001
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.000
Loss after mini-batch 2541: 0.000
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.000
Loss after mini-batch 2611: 0.000
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.002
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 11
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001

```

Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.001
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.002
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.000
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.000
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.002
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.000
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.002

Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.002
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001

Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.000
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001

Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001

Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.003
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.003
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.000
Loss after mini-batch	2441:	0.001

```

Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.002
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.000
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 12
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001

```

Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.000
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.000
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.000
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001

Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.003
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.000

Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.003
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001

Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001

Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.002

```

Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.000
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.002
Starting epoch 13
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.002
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.002
Loss after mini-batch    141: 0.002

```


Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.000
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001

Loss after mini-batch	631:	0.000
Loss after mini-batch	641:	0.001
Loss after mini-batch	651:	0.002
Loss after mini-batch	661:	0.001
Loss after mini-batch	671:	0.001
Loss after mini-batch	681:	0.000
Loss after mini-batch	691:	0.001
Loss after mini-batch	701:	0.001
Loss after mini-batch	711:	0.001
Loss after mini-batch	721:	0.001
Loss after mini-batch	731:	0.001
Loss after mini-batch	741:	0.001
Loss after mini-batch	751:	0.001
Loss after mini-batch	761:	0.001
Loss after mini-batch	771:	0.001
Loss after mini-batch	781:	0.001
Loss after mini-batch	791:	0.000
Loss after mini-batch	801:	0.000
Loss after mini-batch	811:	0.001
Loss after mini-batch	821:	0.002
Loss after mini-batch	831:	0.001
Loss after mini-batch	841:	0.001
Loss after mini-batch	851:	0.001
Loss after mini-batch	861:	0.000
Loss after mini-batch	871:	0.001
Loss after mini-batch	881:	0.001
Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.000
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.002
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.000
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.000
Loss after mini-batch	1091:	0.000
Loss after mini-batch	1101:	0.001

Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.000
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.000
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.003
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001

Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000

Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.002
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001

```

Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.000
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 14
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.001
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.001
Loss after mini-batch 81: 0.000
Loss after mini-batch 91: 0.000
Loss after mini-batch 101: 0.001
Loss after mini-batch 111: 0.001
Loss after mini-batch 121: 0.001
Loss after mini-batch 131: 0.001
Loss after mini-batch 141: 0.001
Loss after mini-batch 151: 0.001
Loss after mini-batch 161: 0.001
Loss after mini-batch 171: 0.001
Loss after mini-batch 181: 0.001
Loss after mini-batch 191: 0.002

```

Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.003
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.002

Loss after mini-batch	681:	0.002
Loss after mini-batch	691:	0.001
Loss after mini-batch	701:	0.001
Loss after mini-batch	711:	0.001
Loss after mini-batch	721:	0.001
Loss after mini-batch	731:	0.000
Loss after mini-batch	741:	0.001
Loss after mini-batch	751:	0.001
Loss after mini-batch	761:	0.001
Loss after mini-batch	771:	0.001
Loss after mini-batch	781:	0.000
Loss after mini-batch	791:	0.001
Loss after mini-batch	801:	0.000
Loss after mini-batch	811:	0.001
Loss after mini-batch	821:	0.001
Loss after mini-batch	831:	0.001
Loss after mini-batch	841:	0.001
Loss after mini-batch	851:	0.001
Loss after mini-batch	861:	0.002
Loss after mini-batch	871:	0.001
Loss after mini-batch	881:	0.001
Loss after mini-batch	891:	0.002
Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.000
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.000
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.002
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.000
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.001

Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001

Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.002
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.003
Loss after mini-batch	2111:	0.001

Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.002
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001

```

Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.000
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.000
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.000
Starting epoch 15
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.000
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001

```

Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.003
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.000
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001

Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.002
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.002
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.000
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.002
Loss after mini-batch	1201: 0.001

Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001

Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.003
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001

Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.002
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.000
Loss after mini-batch	2591:	0.000
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.002
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.000
Loss after mini-batch	2641:	0.000

```

Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.000
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.002
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 16
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.000
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.000
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.000
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001

```

Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001

Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.000
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.004
Loss after mini-batch	1111: 0.003
Loss after mini-batch	1121: 0.003
Loss after mini-batch	1131: 0.002
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.001

Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001

Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001

Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.002
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.002
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.002
Loss after mini-batch	2601:	0.002
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001

```

Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.000
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.000
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 17
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.000
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.001
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.000
Loss after mini-batch 81: 0.000
Loss after mini-batch 91: 0.000
Loss after mini-batch 101: 0.000
Loss after mini-batch 111: 0.001
Loss after mini-batch 121: 0.000
Loss after mini-batch 131: 0.000
Loss after mini-batch 141: 0.001
Loss after mini-batch 151: 0.001
Loss after mini-batch 161: 0.001
Loss after mini-batch 171: 0.001
Loss after mini-batch 181: 0.002
Loss after mini-batch 191: 0.001
Loss after mini-batch 201: 0.001
Loss after mini-batch 211: 0.001
Loss after mini-batch 221: 0.001
Loss after mini-batch 231: 0.001
Loss after mini-batch 241: 0.001
Loss after mini-batch 251: 0.001
Loss after mini-batch 261: 0.001
Loss after mini-batch 271: 0.001
Loss after mini-batch 281: 0.001
Loss after mini-batch 291: 0.001
Loss after mini-batch 301: 0.001
Loss after mini-batch 311: 0.001
Loss after mini-batch 321: 0.001
Loss after mini-batch 331: 0.001
Loss after mini-batch 341: 0.001

```


Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001

Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.002
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.000
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.002
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.002
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.002
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.000
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.001
Loss after mini-batch	1291: 0.001
Loss after mini-batch	1301: 0.000

Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001

Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001

Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.000
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.002
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.000
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.001

```

Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 18
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.000
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.000
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.000
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.000
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.002
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.001
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.001

```

Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.000
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.002

Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.000
Loss after mini-batch	1211: 0.002
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.000
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.002
Loss after mini-batch	1291: 0.002
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.000
Loss after mini-batch	1321: 0.001
Loss after mini-batch	1331: 0.001
Loss after mini-batch	1341: 0.001
Loss after mini-batch	1351: 0.001

Loss after mini-batch 1361: 0.001
Loss after mini-batch 1371: 0.001
Loss after mini-batch 1381: 0.001
Loss after mini-batch 1391: 0.001
Loss after mini-batch 1401: 0.001
Loss after mini-batch 1411: 0.001
Loss after mini-batch 1421: 0.001
Loss after mini-batch 1431: 0.001
Loss after mini-batch 1441: 0.001
Loss after mini-batch 1451: 0.001
Loss after mini-batch 1461: 0.001
Loss after mini-batch 1471: 0.001
Loss after mini-batch 1481: 0.000
Loss after mini-batch 1491: 0.000
Loss after mini-batch 1501: 0.001
Loss after mini-batch 1511: 0.000
Loss after mini-batch 1521: 0.001
Loss after mini-batch 1531: 0.001
Loss after mini-batch 1541: 0.002
Loss after mini-batch 1551: 0.001
Loss after mini-batch 1561: 0.001
Loss after mini-batch 1571: 0.001
Loss after mini-batch 1581: 0.001
Loss after mini-batch 1591: 0.001
Loss after mini-batch 1601: 0.001
Loss after mini-batch 1611: 0.001
Loss after mini-batch 1621: 0.001
Loss after mini-batch 1631: 0.001
Loss after mini-batch 1641: 0.001
Loss after mini-batch 1651: 0.001
Loss after mini-batch 1661: 0.001
Loss after mini-batch 1671: 0.001
Loss after mini-batch 1681: 0.001
Loss after mini-batch 1691: 0.001
Loss after mini-batch 1701: 0.001
Loss after mini-batch 1711: 0.001
Loss after mini-batch 1721: 0.001
Loss after mini-batch 1731: 0.001
Loss after mini-batch 1741: 0.000
Loss after mini-batch 1751: 0.001
Loss after mini-batch 1761: 0.001
Loss after mini-batch 1771: 0.001
Loss after mini-batch 1781: 0.001
Loss after mini-batch 1791: 0.001
Loss after mini-batch 1801: 0.001
Loss after mini-batch 1811: 0.001
Loss after mini-batch 1821: 0.000
Loss after mini-batch 1831: 0.001

Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001

Loss after mini-batch 2321: 0.001
Loss after mini-batch 2331: 0.001
Loss after mini-batch 2341: 0.001
Loss after mini-batch 2351: 0.001
Loss after mini-batch 2361: 0.001
Loss after mini-batch 2371: 0.001
Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.001
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.000
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.000
Loss after mini-batch 2591: 0.000
Loss after mini-batch 2601: 0.000
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.000
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001

```
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 19
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.000
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.002
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.000
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.002
Loss after mini-batch    191: 0.002
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.000
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.000
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.002
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.001
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.001
Loss after mini-batch    401: 0.001
Loss after mini-batch    411: 0.002
Loss after mini-batch    421: 0.001
Loss after mini-batch    431: 0.001
Loss after mini-batch    441: 0.001
```

Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.000
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.002
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001

Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.000
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.002
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.000
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.000
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001

Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001

Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001


```

Loss after mini-batch 2371: 0.001
Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.000
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.000
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.000
Loss after mini-batch 2491: 0.000
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.002
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.000
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.002
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.000
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 20
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001

```

Loss after mini-batch	21: 0.001
Loss after mini-batch	31: 0.002
Loss after mini-batch	41: 0.001
Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.001
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.000
Loss after mini-batch	131: 0.000
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.000
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.004
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.000
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001

Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.003
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.001

Loss after mini-batch	981:	0.000
Loss after mini-batch	991:	0.002
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.000
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.002

Loss after mini-batch 1461: 0.000
Loss after mini-batch 1471: 0.001
Loss after mini-batch 1481: 0.001
Loss after mini-batch 1491: 0.001
Loss after mini-batch 1501: 0.001
Loss after mini-batch 1511: 0.001
Loss after mini-batch 1521: 0.000
Loss after mini-batch 1531: 0.001
Loss after mini-batch 1541: 0.001
Loss after mini-batch 1551: 0.001
Loss after mini-batch 1561: 0.001
Loss after mini-batch 1571: 0.001
Loss after mini-batch 1581: 0.000
Loss after mini-batch 1591: 0.001
Loss after mini-batch 1601: 0.002
Loss after mini-batch 1611: 0.001
Loss after mini-batch 1621: 0.001
Loss after mini-batch 1631: 0.001
Loss after mini-batch 1641: 0.001
Loss after mini-batch 1651: 0.001
Loss after mini-batch 1661: 0.001
Loss after mini-batch 1671: 0.001
Loss after mini-batch 1681: 0.001
Loss after mini-batch 1691: 0.001
Loss after mini-batch 1701: 0.001
Loss after mini-batch 1711: 0.001
Loss after mini-batch 1721: 0.001
Loss after mini-batch 1731: 0.001
Loss after mini-batch 1741: 0.001
Loss after mini-batch 1751: 0.000
Loss after mini-batch 1761: 0.001
Loss after mini-batch 1771: 0.001
Loss after mini-batch 1781: 0.001
Loss after mini-batch 1791: 0.001
Loss after mini-batch 1801: 0.001
Loss after mini-batch 1811: 0.000
Loss after mini-batch 1821: 0.001
Loss after mini-batch 1831: 0.002
Loss after mini-batch 1841: 0.001
Loss after mini-batch 1851: 0.001
Loss after mini-batch 1861: 0.000
Loss after mini-batch 1871: 0.001
Loss after mini-batch 1881: 0.001
Loss after mini-batch 1891: 0.001
Loss after mini-batch 1901: 0.002
Loss after mini-batch 1911: 0.001
Loss after mini-batch 1921: 0.001
Loss after mini-batch 1931: 0.001

Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001

Loss after mini-batch 2421: 0.000
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.000
Loss after mini-batch 2471: 0.000
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.002
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Training process has finished.

Calculate error for test

Result: 2.8987754719841756e-05

Result: 1.737798069415805e-14

Result: 6.226525531170417e-07

Calculate error for train

Result: 2.83641189786924e-05

Result: 1.6860413089303032e-14

Result: 6.108775835135749e-07

Training with 50 epochs.

Starting epoch 1

Loss after mini-batch	1:	0.234
Loss after mini-batch	11:	2.060
Loss after mini-batch	21:	1.724
Loss after mini-batch	31:	1.282
Loss after mini-batch	41:	0.929
Loss after mini-batch	51:	0.593
Loss after mini-batch	61:	0.334
Loss after mini-batch	71:	0.141
Loss after mini-batch	81:	0.036
Loss after mini-batch	91:	0.012
Loss after mini-batch	101:	0.010
Loss after mini-batch	111:	0.008
Loss after mini-batch	121:	0.008
Loss after mini-batch	131:	0.008
Loss after mini-batch	141:	0.007
Loss after mini-batch	151:	0.007
Loss after mini-batch	161:	0.008
Loss after mini-batch	171:	0.006
Loss after mini-batch	181:	0.007
Loss after mini-batch	191:	0.007
Loss after mini-batch	201:	0.007
Loss after mini-batch	211:	0.004
Loss after mini-batch	221:	0.006
Loss after mini-batch	231:	0.006
Loss after mini-batch	241:	0.008
Loss after mini-batch	251:	0.006
Loss after mini-batch	261:	0.005
Loss after mini-batch	271:	0.004
Loss after mini-batch	281:	0.007
Loss after mini-batch	291:	0.005
Loss after mini-batch	301:	0.005
Loss after mini-batch	311:	0.007
Loss after mini-batch	321:	0.005
Loss after mini-batch	331:	0.007
Loss after mini-batch	341:	0.005
Loss after mini-batch	351:	0.004
Loss after mini-batch	361:	0.006
Loss after mini-batch	371:	0.006
Loss after mini-batch	381:	0.005
Loss after mini-batch	391:	0.005
Loss after mini-batch	401:	0.003
Loss after mini-batch	411:	0.006
Loss after mini-batch	421:	0.003
Loss after mini-batch	431:	0.006

Loss after mini-batch	441: 0.003
Loss after mini-batch	451: 0.003
Loss after mini-batch	461: 0.004
Loss after mini-batch	471: 0.003
Loss after mini-batch	481: 0.008
Loss after mini-batch	491: 0.006
Loss after mini-batch	501: 0.003
Loss after mini-batch	511: 0.004
Loss after mini-batch	521: 0.009
Loss after mini-batch	531: 0.003
Loss after mini-batch	541: 0.005
Loss after mini-batch	551: 0.003
Loss after mini-batch	561: 0.004
Loss after mini-batch	571: 0.004
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.003
Loss after mini-batch	601: 0.005
Loss after mini-batch	611: 0.004
Loss after mini-batch	621: 0.005
Loss after mini-batch	631: 0.003
Loss after mini-batch	641: 0.005
Loss after mini-batch	651: 0.004
Loss after mini-batch	661: 0.004
Loss after mini-batch	671: 0.003
Loss after mini-batch	681: 0.007
Loss after mini-batch	691: 0.005
Loss after mini-batch	701: 0.005
Loss after mini-batch	711: 0.003
Loss after mini-batch	721: 0.003
Loss after mini-batch	731: 0.005
Loss after mini-batch	741: 0.006
Loss after mini-batch	751: 0.006
Loss after mini-batch	761: 0.005
Loss after mini-batch	771: 0.003
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.003
Loss after mini-batch	801: 0.004
Loss after mini-batch	811: 0.004
Loss after mini-batch	821: 0.003
Loss after mini-batch	831: 0.004
Loss after mini-batch	841: 0.003
Loss after mini-batch	851: 0.004
Loss after mini-batch	861: 0.004
Loss after mini-batch	871: 0.003
Loss after mini-batch	881: 0.003
Loss after mini-batch	891: 0.006
Loss after mini-batch	901: 0.005
Loss after mini-batch	911: 0.006

Loss after mini-batch	921:	0.004
Loss after mini-batch	931:	0.003
Loss after mini-batch	941:	0.004
Loss after mini-batch	951:	0.004
Loss after mini-batch	961:	0.004
Loss after mini-batch	971:	0.005
Loss after mini-batch	981:	0.002
Loss after mini-batch	991:	0.002
Loss after mini-batch	1001:	0.004
Loss after mini-batch	1011:	0.004
Loss after mini-batch	1021:	0.004
Loss after mini-batch	1031:	0.005
Loss after mini-batch	1041:	0.003
Loss after mini-batch	1051:	0.004
Loss after mini-batch	1061:	0.003
Loss after mini-batch	1071:	0.004
Loss after mini-batch	1081:	0.003
Loss after mini-batch	1091:	0.004
Loss after mini-batch	1101:	0.005
Loss after mini-batch	1111:	0.003
Loss after mini-batch	1121:	0.005
Loss after mini-batch	1131:	0.005
Loss after mini-batch	1141:	0.003
Loss after mini-batch	1151:	0.004
Loss after mini-batch	1161:	0.005
Loss after mini-batch	1171:	0.003
Loss after mini-batch	1181:	0.004
Loss after mini-batch	1191:	0.003
Loss after mini-batch	1201:	0.004
Loss after mini-batch	1211:	0.003
Loss after mini-batch	1221:	0.003
Loss after mini-batch	1231:	0.003
Loss after mini-batch	1241:	0.003
Loss after mini-batch	1251:	0.003
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.004
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.004
Loss after mini-batch	1311:	0.003
Loss after mini-batch	1321:	0.006
Loss after mini-batch	1331:	0.003
Loss after mini-batch	1341:	0.003
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.003
Loss after mini-batch	1381:	0.004
Loss after mini-batch	1391:	0.004

Loss after mini-batch	1401:	0.003
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.004
Loss after mini-batch	1431:	0.004
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.003
Loss after mini-batch	1461:	0.003
Loss after mini-batch	1471:	0.005
Loss after mini-batch	1481:	0.003
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.005
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.004
Loss after mini-batch	1531:	0.003
Loss after mini-batch	1541:	0.003
Loss after mini-batch	1551:	0.003
Loss after mini-batch	1561:	0.003
Loss after mini-batch	1571:	0.003
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.003
Loss after mini-batch	1611:	0.003
Loss after mini-batch	1621:	0.002
Loss after mini-batch	1631:	0.003
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.003
Loss after mini-batch	1671:	0.003
Loss after mini-batch	1681:	0.004
Loss after mini-batch	1691:	0.003
Loss after mini-batch	1701:	0.003
Loss after mini-batch	1711:	0.003
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.003
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.003
Loss after mini-batch	1761:	0.005
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.003
Loss after mini-batch	1791:	0.003
Loss after mini-batch	1801:	0.003
Loss after mini-batch	1811:	0.004
Loss after mini-batch	1821:	0.003
Loss after mini-batch	1831:	0.004
Loss after mini-batch	1841:	0.004
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.003

Loss after mini-batch	1881:	0.004
Loss after mini-batch	1891:	0.004
Loss after mini-batch	1901:	0.003
Loss after mini-batch	1911:	0.003
Loss after mini-batch	1921:	0.004
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.003
Loss after mini-batch	1951:	0.003
Loss after mini-batch	1961:	0.003
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.003
Loss after mini-batch	1991:	0.003
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.004
Loss after mini-batch	2021:	0.004
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.004
Loss after mini-batch	2071:	0.004
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.003
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.003
Loss after mini-batch	2151:	0.002
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.003
Loss after mini-batch	2181:	0.003
Loss after mini-batch	2191:	0.003
Loss after mini-batch	2201:	0.003
Loss after mini-batch	2211:	0.003
Loss after mini-batch	2221:	0.003
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.003
Loss after mini-batch	2251:	0.003
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.003
Loss after mini-batch	2291:	0.003
Loss after mini-batch	2301:	0.003
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.003
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.003
Loss after mini-batch	2351:	0.002

```
Loss after mini-batch 2361: 0.002
Loss after mini-batch 2371: 0.003
Loss after mini-batch 2381: 0.003
Loss after mini-batch 2391: 0.003
Loss after mini-batch 2401: 0.004
Loss after mini-batch 2411: 0.003
Loss after mini-batch 2421: 0.005
Loss after mini-batch 2431: 0.005
Loss after mini-batch 2441: 0.004
Loss after mini-batch 2451: 0.002
Loss after mini-batch 2461: 0.003
Loss after mini-batch 2471: 0.002
Loss after mini-batch 2481: 0.003
Loss after mini-batch 2491: 0.004
Loss after mini-batch 2501: 0.003
Loss after mini-batch 2511: 0.003
Loss after mini-batch 2521: 0.004
Loss after mini-batch 2531: 0.003
Loss after mini-batch 2541: 0.002
Loss after mini-batch 2551: 0.003
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.002
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.002
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.003
Loss after mini-batch 2621: 0.003
Loss after mini-batch 2631: 0.003
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.004
Loss after mini-batch 2661: 0.003
Loss after mini-batch 2671: 0.002
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.003
Loss after mini-batch 2701: 0.003
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.004
Loss after mini-batch 2771: 0.004
Loss after mini-batch 2781: 0.003
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 2
Loss after mini-batch      1: 0.000
```

Loss after mini-batch	11: 0.004
Loss after mini-batch	21: 0.002
Loss after mini-batch	31: 0.003
Loss after mini-batch	41: 0.001
Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.003
Loss after mini-batch	71: 0.003
Loss after mini-batch	81: 0.002
Loss after mini-batch	91: 0.002
Loss after mini-batch	101: 0.003
Loss after mini-batch	111: 0.002
Loss after mini-batch	121: 0.002
Loss after mini-batch	131: 0.002
Loss after mini-batch	141: 0.002
Loss after mini-batch	151: 0.002
Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.003
Loss after mini-batch	181: 0.002
Loss after mini-batch	191: 0.002
Loss after mini-batch	201: 0.003
Loss after mini-batch	211: 0.004
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.002
Loss after mini-batch	251: 0.005
Loss after mini-batch	261: 0.004
Loss after mini-batch	271: 0.003
Loss after mini-batch	281: 0.002
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.003
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.003
Loss after mini-batch	331: 0.003
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.003
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.003
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.003
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.003
Loss after mini-batch	471: 0.003
Loss after mini-batch	481: 0.002

Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.003
Loss after mini-batch	531: 0.004
Loss after mini-batch	541: 0.003
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.003
Loss after mini-batch	601: 0.003
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.003
Loss after mini-batch	631: 0.003
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.003
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.003
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.004
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.003
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.003
Loss after mini-batch	831: 0.003
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.003
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.003
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.002

Loss after mini-batch	971:	0.003
Loss after mini-batch	981:	0.002
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.002
Loss after mini-batch	1011:	0.003
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.002
Loss after mini-batch	1041:	0.003
Loss after mini-batch	1051:	0.004
Loss after mini-batch	1061:	0.003
Loss after mini-batch	1071:	0.002
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.003
Loss after mini-batch	1101:	0.002
Loss after mini-batch	1111:	0.002
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.003
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.003
Loss after mini-batch	1191:	0.002
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.002
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.002
Loss after mini-batch	1321:	0.003
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.003
Loss after mini-batch	1351:	0.003
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.003

Loss after mini-batch	1451:	0.003
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.004
Loss after mini-batch	1491:	0.004
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.002
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.003
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.003
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.003
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.004
Loss after mini-batch	1751:	0.003
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.003
Loss after mini-batch	1781:	0.003
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.004
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.003
Loss after mini-batch	1831:	0.004
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.004
Loss after mini-batch	1891:	0.004
Loss after mini-batch	1901:	0.003
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.003

Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.003
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.003
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.003
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.003
Loss after mini-batch	2251:	0.003
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.003
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.003
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.003

```

Loss after mini-batch 2411: 0.003
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.004
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.002
Loss after mini-batch 2491: 0.002
Loss after mini-batch 2501: 0.002
Loss after mini-batch 2511: 0.002
Loss after mini-batch 2521: 0.002
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.004
Loss after mini-batch 2561: 0.002
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.003
Loss after mini-batch 2601: 0.003
Loss after mini-batch 2611: 0.002
Loss after mini-batch 2621: 0.002
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.003
Loss after mini-batch 2681: 0.003
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.002
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.003
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.002
Starting epoch 3
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.002
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.003

```

Loss after mini-batch	61: 0.004
Loss after mini-batch	71: 0.002
Loss after mini-batch	81: 0.002
Loss after mini-batch	91: 0.002
Loss after mini-batch	101: 0.002
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.002
Loss after mini-batch	131: 0.002
Loss after mini-batch	141: 0.003
Loss after mini-batch	151: 0.004
Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.002
Loss after mini-batch	191: 0.002
Loss after mini-batch	201: 0.002
Loss after mini-batch	211: 0.002
Loss after mini-batch	221: 0.003
Loss after mini-batch	231: 0.002
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.002
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.003
Loss after mini-batch	281: 0.003
Loss after mini-batch	291: 0.003
Loss after mini-batch	301: 0.003
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.002
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001

Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.005
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.003
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.002
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.003
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.002
Loss after mini-batch	971: 0.002
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.002
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.002

Loss after mini-batch	1021:	0.002
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.002
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.002
Loss after mini-batch	1091:	0.003
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.002
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.003
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.002
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.002
Loss after mini-batch	1321:	0.003
Loss after mini-batch	1331:	0.003
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.003
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.004
Loss after mini-batch	1491:	0.002

Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.003
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.002
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.002
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.003
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.003
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.003
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001

Loss after mini-batch	1981:	0.002
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.003
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.002
Loss after mini-batch	2201:	0.004
Loss after mini-batch	2211:	0.003
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.003
Loss after mini-batch	2421:	0.002
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.004


```

Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.002
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.003
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.002
Loss after mini-batch 2531: 0.002
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.002
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.002
Loss after mini-batch 2611: 0.002
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.002
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.002
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.002
Starting epoch 4
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.003
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.002
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.002
Loss after mini-batch     71: 0.002
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001

```

Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.002
Loss after mini-batch	141: 0.002
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.002
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.002
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.003
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001

Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.003
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.000
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001

Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.002
Loss after mini-batch	1111:	0.002
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.002
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001

Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.002
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.003
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001

Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.003
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.003
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.002
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001

```

Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.002
Loss after mini-batch 2541: 0.002
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.003
Loss after mini-batch 2621: 0.002
Loss after mini-batch 2631: 0.002
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.004
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.002
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.003
Loss after mini-batch 2811: 0.002
Starting epoch 5
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.002
Loss after mini-batch     71: 0.002
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.003
Loss after mini-batch    151: 0.002

```

Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.002
Loss after mini-batch	381: 0.002
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.003
Loss after mini-batch	631: 0.001

Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.002
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.002
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.002
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.003
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.002
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.002
Loss after mini-batch	1071: 0.002
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001

Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.002
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.002
Loss after mini-batch	1331:	0.003
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001

Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.002
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.002
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.002
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.003
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.002
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001

Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.002
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.002
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001

```

Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.002
Loss after mini-batch 2631: 0.002
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 6
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.001
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.001
Loss after mini-batch 81: 0.001
Loss after mini-batch 91: 0.001
Loss after mini-batch 101: 0.001
Loss after mini-batch 111: 0.000
Loss after mini-batch 121: 0.001
Loss after mini-batch 131: 0.001
Loss after mini-batch 141: 0.001
Loss after mini-batch 151: 0.001
Loss after mini-batch 161: 0.002
Loss after mini-batch 171: 0.001
Loss after mini-batch 181: 0.001
Loss after mini-batch 191: 0.001
Loss after mini-batch 201: 0.001

```

Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.000
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.003
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.004
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.000
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001

Loss after mini-batch	691:	0.001
Loss after mini-batch	701:	0.001
Loss after mini-batch	711:	0.001
Loss after mini-batch	721:	0.001
Loss after mini-batch	731:	0.000
Loss after mini-batch	741:	0.001
Loss after mini-batch	751:	0.000
Loss after mini-batch	761:	0.001
Loss after mini-batch	771:	0.002
Loss after mini-batch	781:	0.001
Loss after mini-batch	791:	0.001
Loss after mini-batch	801:	0.001
Loss after mini-batch	811:	0.001
Loss after mini-batch	821:	0.001
Loss after mini-batch	831:	0.001
Loss after mini-batch	841:	0.001
Loss after mini-batch	851:	0.003
Loss after mini-batch	861:	0.003
Loss after mini-batch	871:	0.001
Loss after mini-batch	881:	0.001
Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.000
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.002
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.002
Loss after mini-batch	1031:	0.002
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.002
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.004
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.002
Loss after mini-batch	1161:	0.001

Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.002
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.003
Loss after mini-batch	1281:	0.003
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.002
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001

Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.002
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.002
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001

Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.002
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.000
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.000
Loss after mini-batch	2581:	0.002
Loss after mini-batch	2591:	0.002
Loss after mini-batch	2601:	0.001

```

Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 7
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.003
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.002
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.002
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001

```

Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.000
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.003
Loss after mini-batch	331: 0.002
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.002
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.000
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001

Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.002
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.002
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.002
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.002
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.000
Loss after mini-batch	1211: 0.001

Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.002
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.002
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.002
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.002

Loss after mini-batch 1701: 0.001
Loss after mini-batch 1711: 0.001
Loss after mini-batch 1721: 0.001
Loss after mini-batch 1731: 0.001
Loss after mini-batch 1741: 0.002
Loss after mini-batch 1751: 0.001
Loss after mini-batch 1761: 0.000
Loss after mini-batch 1771: 0.001
Loss after mini-batch 1781: 0.001
Loss after mini-batch 1791: 0.001
Loss after mini-batch 1801: 0.001
Loss after mini-batch 1811: 0.001
Loss after mini-batch 1821: 0.000
Loss after mini-batch 1831: 0.002
Loss after mini-batch 1841: 0.001
Loss after mini-batch 1851: 0.001
Loss after mini-batch 1861: 0.001
Loss after mini-batch 1871: 0.002
Loss after mini-batch 1881: 0.001
Loss after mini-batch 1891: 0.002
Loss after mini-batch 1901: 0.001
Loss after mini-batch 1911: 0.001
Loss after mini-batch 1921: 0.001
Loss after mini-batch 1931: 0.002
Loss after mini-batch 1941: 0.002
Loss after mini-batch 1951: 0.001
Loss after mini-batch 1961: 0.001
Loss after mini-batch 1971: 0.001
Loss after mini-batch 1981: 0.001
Loss after mini-batch 1991: 0.001
Loss after mini-batch 2001: 0.001
Loss after mini-batch 2011: 0.002
Loss after mini-batch 2021: 0.001
Loss after mini-batch 2031: 0.001
Loss after mini-batch 2041: 0.001
Loss after mini-batch 2051: 0.001
Loss after mini-batch 2061: 0.002
Loss after mini-batch 2071: 0.002
Loss after mini-batch 2081: 0.001
Loss after mini-batch 2091: 0.002
Loss after mini-batch 2101: 0.001
Loss after mini-batch 2111: 0.002
Loss after mini-batch 2121: 0.001
Loss after mini-batch 2131: 0.001
Loss after mini-batch 2141: 0.001
Loss after mini-batch 2151: 0.001
Loss after mini-batch 2161: 0.001
Loss after mini-batch 2171: 0.001

Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.002
Loss after mini-batch	2291:	0.002
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.002
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.000
Loss after mini-batch	2631:	0.000
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001


```

Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 8
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.002
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.002
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.002
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001

```

Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.002
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.002
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.003
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001

Loss after mini-batch	791:	0.002
Loss after mini-batch	801:	0.001
Loss after mini-batch	811:	0.001
Loss after mini-batch	821:	0.002
Loss after mini-batch	831:	0.001
Loss after mini-batch	841:	0.001
Loss after mini-batch	851:	0.001
Loss after mini-batch	861:	0.001
Loss after mini-batch	871:	0.001
Loss after mini-batch	881:	0.001
Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.000
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.000
Loss after mini-batch	1051:	0.000
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.000
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.002
Loss after mini-batch	1121:	0.002
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.000
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.003
Loss after mini-batch	1261:	0.003

Loss after mini-batch	1271:	0.002
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.003
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.002
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001

Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.002
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.003
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.001

Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.002
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.002
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.002
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.000
Loss after mini-batch	2581:	0.002
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.002
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.000

```

Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.002
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 9
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.002
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.000
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.002
Loss after mini-batch    251: 0.002
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001

```

Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.002
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.002
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001

Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.002
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.000
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.002
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.002
Loss after mini-batch	1171: 0.002
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.002
Loss after mini-batch	1281: 0.001
Loss after mini-batch	1291: 0.001
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.001

Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.003
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.001

Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.003
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.002
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.002
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001

Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.002
Loss after mini-batch	2461:	0.002
Loss after mini-batch	2471:	0.002
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.002
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.000
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.002
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.000
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001

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Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.002
Starting epoch 10
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.000
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.000
Loss after mini-batch    221: 0.000
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.000
Loss after mini-batch    371: 0.001
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.001
Loss after mini-batch    401: 0.001

```

Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.002
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.000

Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.000
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.002
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.000
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.001

Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001

Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001

Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.002
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.002
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.000
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.000
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.002
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001
Loss after mini-batch	2761:	0.001
Loss after mini-batch	2771:	0.001
Loss after mini-batch	2781:	0.001
Loss after mini-batch	2791:	0.002
Loss after mini-batch	2801:	0.001

```

Loss after mini-batch 2811: 0.001
Starting epoch 11
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.000
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.002
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.000
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.001
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.001
Loss after mini-batch    401: 0.000
Loss after mini-batch    411: 0.001
Loss after mini-batch    421: 0.001
Loss after mini-batch    431: 0.001
Loss after mini-batch    441: 0.001
Loss after mini-batch    451: 0.001

```

Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.000
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.000
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.002
Loss after mini-batch	671: 0.002
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.002
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.003
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001

Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.002
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.002
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.002
Loss after mini-batch	1191:	0.000
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.002
Loss after mini-batch	1411:	0.001

Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.002
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.002
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.002
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001

Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.004
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001

```

Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.000
Loss after mini-batch 2421: 0.000
Loss after mini-batch 2431: 0.000
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.000
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.000
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.000
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 12
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001

```


Loss after mini-batch	31: 0.001
Loss after mini-batch	41: 0.001
Loss after mini-batch	51: 0.002
Loss after mini-batch	61: 0.002
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.000
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.000
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.000
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.001

Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.002

Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.002
Loss after mini-batch	1061:	0.002
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.002
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001

Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.002
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001

Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.003
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001

```

Loss after mini-batch 2431: 0.003
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.002
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.000
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.000
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.003
Loss after mini-batch 2801: 0.002
Loss after mini-batch 2811: 0.001
Starting epoch 13
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.002
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001

```

Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.000
Loss after mini-batch	111: 0.002
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.002
Loss after mini-batch	151: 0.002
Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.002
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.002
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.000
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.000
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.000
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001

Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.000
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.000
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001

Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.000
Loss after mini-batch	1081:	0.000
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.000
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.002
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001

Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.000
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.002
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.002
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000

Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001

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Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.000
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.000
Starting epoch 14
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.000
Loss after mini-batch    121: 0.001

```

Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.002
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.000
Loss after mini-batch	201: 0.000
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.002
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.002
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.000
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.002
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.000

Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.000
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001

Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.002
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.000
Loss after mini-batch	1261:	0.002
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.003
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.004
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001

Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.002
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.002
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001

Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.002
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.000
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.001

```

Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.000
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.000
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 15
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.000
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001

```

Loss after mini-batch	181: 0.002
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.000
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.002
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.003
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001

Loss after mini-batch	661: 0.000
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.002
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.002
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.000
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.000
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.000
Loss after mini-batch	1131: 0.000

Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.003
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001

Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.002
Loss after mini-batch	1771:	0.002
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001

Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.000
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001

```

Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.000
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.000
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 16
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.000
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.000
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.002
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.000
Loss after mini-batch    221: 0.000

```


Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.000
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.000
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001

Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001

Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.002
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.003
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000

Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001

Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.000
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.000
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.000
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.000
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001

```

Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.002
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 17
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.002
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.000
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.000
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001

```

Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.002
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.003
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.000

Loss after mini-batch	761:	0.000
Loss after mini-batch	771:	0.001
Loss after mini-batch	781:	0.001
Loss after mini-batch	791:	0.001
Loss after mini-batch	801:	0.001
Loss after mini-batch	811:	0.001
Loss after mini-batch	821:	0.000
Loss after mini-batch	831:	0.001
Loss after mini-batch	841:	0.001
Loss after mini-batch	851:	0.001
Loss after mini-batch	861:	0.001
Loss after mini-batch	871:	0.001
Loss after mini-batch	881:	0.001
Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.002
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.002
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.000
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.000
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.002
Loss after mini-batch	1221:	0.000
Loss after mini-batch	1231:	0.000

Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.002
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001

Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001

Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.002
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.000
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.000
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.002
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.002
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.000

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Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 18
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.000
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.000
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.000
Loss after mini-batch    201: 0.000
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.002
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001

```

Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.000
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001

Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.000
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.000
Loss after mini-batch	1101: 0.000
Loss after mini-batch	1111: 0.000
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.000
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.002
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.001

Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.002
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001

Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001

Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.002
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.000
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.000
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001

```

Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 19
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.000
Loss after mini-batch    241: 0.000
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.000
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.002

```

Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000

Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.002
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.000
Loss after mini-batch	1071: 0.002
Loss after mini-batch	1081: 0.002
Loss after mini-batch	1091: 0.002
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.000
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.000
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.000
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.000
Loss after mini-batch	1291: 0.002
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.001
Loss after mini-batch	1321: 0.000
Loss after mini-batch	1331: 0.000

Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.000
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.003
Loss after mini-batch	1801:	0.002
Loss after mini-batch	1811:	0.002

Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.003

Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.000
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.002
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.000
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.000
Loss after mini-batch	2621:	0.000
Loss after mini-batch	2631:	0.000
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001
Loss after mini-batch	2761:	0.001
Loss after mini-batch	2771:	0.001

```

Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 20
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.001
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.001
Loss after mini-batch 81: 0.001
Loss after mini-batch 91: 0.001
Loss after mini-batch 101: 0.000
Loss after mini-batch 111: 0.001
Loss after mini-batch 121: 0.000
Loss after mini-batch 131: 0.001
Loss after mini-batch 141: 0.001
Loss after mini-batch 151: 0.001
Loss after mini-batch 161: 0.001
Loss after mini-batch 171: 0.001
Loss after mini-batch 181: 0.002
Loss after mini-batch 191: 0.001
Loss after mini-batch 201: 0.001
Loss after mini-batch 211: 0.001
Loss after mini-batch 221: 0.001
Loss after mini-batch 231: 0.000
Loss after mini-batch 241: 0.000
Loss after mini-batch 251: 0.001
Loss after mini-batch 261: 0.000
Loss after mini-batch 271: 0.001
Loss after mini-batch 281: 0.001
Loss after mini-batch 291: 0.000
Loss after mini-batch 301: 0.000
Loss after mini-batch 311: 0.000
Loss after mini-batch 321: 0.001
Loss after mini-batch 331: 0.002
Loss after mini-batch 341: 0.001
Loss after mini-batch 351: 0.001
Loss after mini-batch 361: 0.001
Loss after mini-batch 371: 0.001
Loss after mini-batch 381: 0.001
Loss after mini-batch 391: 0.002
Loss after mini-batch 401: 0.001
Loss after mini-batch 411: 0.001
Loss after mini-batch 421: 0.001

```


Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.002
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.003
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.002
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.000

Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001

Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.002
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.002
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.001

Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001

Loss after mini-batch 2351: 0.001
Loss after mini-batch 2361: 0.001
Loss after mini-batch 2371: 0.001
Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.000
Loss after mini-batch 2421: 0.002
Loss after mini-batch 2431: 0.000
Loss after mini-batch 2441: 0.000
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.000
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.000
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.000
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.000
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.000
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.000
Starting epoch 21

Loss after mini-batch	1:	0.000
Loss after mini-batch	11:	0.001
Loss after mini-batch	21:	0.001
Loss after mini-batch	31:	0.001
Loss after mini-batch	41:	0.001
Loss after mini-batch	51:	0.002
Loss after mini-batch	61:	0.002
Loss after mini-batch	71:	0.001
Loss after mini-batch	81:	0.002
Loss after mini-batch	91:	0.001
Loss after mini-batch	101:	0.001
Loss after mini-batch	111:	0.002
Loss after mini-batch	121:	0.001
Loss after mini-batch	131:	0.001
Loss after mini-batch	141:	0.000
Loss after mini-batch	151:	0.001
Loss after mini-batch	161:	0.001
Loss after mini-batch	171:	0.001
Loss after mini-batch	181:	0.001
Loss after mini-batch	191:	0.001
Loss after mini-batch	201:	0.001
Loss after mini-batch	211:	0.001
Loss after mini-batch	221:	0.001
Loss after mini-batch	231:	0.001
Loss after mini-batch	241:	0.001
Loss after mini-batch	251:	0.001
Loss after mini-batch	261:	0.001
Loss after mini-batch	271:	0.001
Loss after mini-batch	281:	0.001
Loss after mini-batch	291:	0.000
Loss after mini-batch	301:	0.000
Loss after mini-batch	311:	0.001
Loss after mini-batch	321:	0.000
Loss after mini-batch	331:	0.001
Loss after mini-batch	341:	0.000
Loss after mini-batch	351:	0.001
Loss after mini-batch	361:	0.001
Loss after mini-batch	371:	0.001
Loss after mini-batch	381:	0.000
Loss after mini-batch	391:	0.000
Loss after mini-batch	401:	0.001
Loss after mini-batch	411:	0.001
Loss after mini-batch	421:	0.001
Loss after mini-batch	431:	0.001
Loss after mini-batch	441:	0.001
Loss after mini-batch	451:	0.001
Loss after mini-batch	461:	0.001
Loss after mini-batch	471:	0.001

Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.002
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.000
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.002
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001

Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.000
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.000
Loss after mini-batch	1011:	0.002
Loss after mini-batch	1021:	0.002
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.000
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.000
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.000
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.000
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001

Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001

Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.002
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.002
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.002
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001

```
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.000
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.000
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.000
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.002
Starting epoch 22
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.000
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
```

Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.001
Loss after mini-batch	71: 0.002
Loss after mini-batch	81: 0.001
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.000
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.000
Loss after mini-batch	191: 0.000
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.000
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.000
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.000
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001

Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.002
Loss after mini-batch	931: 0.000
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001

Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.000
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.000
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.000
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.002
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.002
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001

Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.002
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.002
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001

Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.000
Loss after mini-batch	2441:	0.001


```

Loss after mini-batch 2451: 0.000
Loss after mini-batch 2461: 0.002
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.002
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.000
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.000
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 23
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.000
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.000
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001

```

Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.000
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.000
Loss after mini-batch	231: 0.000
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.000
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.000
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.002
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.000
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.000
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001

Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.003
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.000
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001

Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.000
Loss after mini-batch	1081:	0.000
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.000
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.002
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001

Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001

Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.002
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.000

```

Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.000
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.000
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.002
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 24
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.002
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.002
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.000
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.000
Loss after mini-batch    141: 0.001

```

Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.000
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.000
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.000
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.000
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.000
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.002
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000

Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.000
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.000
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.002

Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.000
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000

Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.002
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001

Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.002
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.002
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.000
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.000

```
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.000
Loss after mini-batch 2591: 0.000
Loss after mini-batch 2601: 0.000
Loss after mini-batch 2611: 0.000
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.000
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.000
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 25
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.000
Loss after mini-batch 41: 0.001
Loss after mini-batch 51: 0.000
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.001
Loss after mini-batch 81: 0.001
Loss after mini-batch 91: 0.001
Loss after mini-batch 101: 0.000
Loss after mini-batch 111: 0.001
Loss after mini-batch 121: 0.001
Loss after mini-batch 131: 0.001
Loss after mini-batch 141: 0.002
Loss after mini-batch 151: 0.001
Loss after mini-batch 161: 0.001
Loss after mini-batch 171: 0.001
Loss after mini-batch 181: 0.001
Loss after mini-batch 191: 0.001
```

Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.000
Loss after mini-batch	231: 0.000
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.002
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001

Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.000
Loss after mini-batch	701: 0.002
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.000

Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.000
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001

Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.002
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000

Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.002
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.000
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.000
Loss after mini-batch	2591:	0.001

```
Loss after mini-batch 2601: 0.000
Loss after mini-batch 2611: 0.000
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.000
Loss after mini-batch 2651: 0.000
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 26
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.000
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
```

Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.000
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.000
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.000
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.002
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000

Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.000
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.002
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.000
Loss after mini-batch	1131: 0.000
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.000
Loss after mini-batch	1191: 0.000
Loss after mini-batch	1201: 0.001

Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.000
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001

Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.002
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001

Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.000
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.000
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.000
Loss after mini-batch	2631:	0.000
Loss after mini-batch	2641:	0.001


```

Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.000
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 27
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.000
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.000
Loss after mini-batch    201: 0.000
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.000
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001

```

Loss after mini-batch	301: 0.000
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.000
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.000
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.002
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.002
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001

Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.002
Loss after mini-batch	801: 0.002
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.000
Loss after mini-batch	981: 0.000
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.000
Loss after mini-batch	1141: 0.000
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.000
Loss after mini-batch	1181: 0.000
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.000

Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.002
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.001

Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001

Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.000
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.002
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.000
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.000
Loss after mini-batch	2601:	0.000
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.000
Loss after mini-batch	2651:	0.000
Loss after mini-batch	2661:	0.000
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001

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Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.000
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 28
Loss after mini-batch    1: 0.000
Loss after mini-batch   11: 0.001
Loss after mini-batch   21: 0.001
Loss after mini-batch   31: 0.001
Loss after mini-batch   41: 0.001
Loss after mini-batch   51: 0.001
Loss after mini-batch   61: 0.001
Loss after mini-batch   71: 0.000
Loss after mini-batch   81: 0.000
Loss after mini-batch   91: 0.001
Loss after mini-batch  101: 0.000
Loss after mini-batch  111: 0.001
Loss after mini-batch  121: 0.000
Loss after mini-batch  131: 0.001
Loss after mini-batch  141: 0.000
Loss after mini-batch  151: 0.001
Loss after mini-batch  161: 0.001
Loss after mini-batch  171: 0.001
Loss after mini-batch  181: 0.001
Loss after mini-batch  191: 0.000
Loss after mini-batch  201: 0.001
Loss after mini-batch  211: 0.001
Loss after mini-batch  221: 0.001
Loss after mini-batch  231: 0.001
Loss after mini-batch  241: 0.001
Loss after mini-batch  251: 0.001
Loss after mini-batch  261: 0.001
Loss after mini-batch  271: 0.000
Loss after mini-batch  281: 0.000
Loss after mini-batch  291: 0.001
Loss after mini-batch  301: 0.000
Loss after mini-batch  311: 0.000
Loss after mini-batch  321: 0.001
Loss after mini-batch  331: 0.000
Loss after mini-batch  341: 0.001

```

Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.000
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.002
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.002
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.000
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001

Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.002
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.000
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.002
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.000
Loss after mini-batch	1171: 0.000
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.000
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.000
Loss after mini-batch	1271: 0.000
Loss after mini-batch	1281: 0.000
Loss after mini-batch	1291: 0.001
Loss after mini-batch	1301: 0.001

Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.000
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001

Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.002
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001

Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.000
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.002
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.000
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.002
Loss after mini-batch	2541:	0.000
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.000
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.000
Loss after mini-batch	2641:	0.000
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.000
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.002
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.002
Loss after mini-batch	2741:	0.001

```

Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.000
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 29
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.002
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.000
Loss after mini-batch    281: 0.000
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.000
Loss after mini-batch    351: 0.002
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.002
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.001

```

Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.001

Loss after mini-batch	881:	0.000
Loss after mini-batch	891:	0.001
Loss after mini-batch	901:	0.001
Loss after mini-batch	911:	0.000
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.000
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.002
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.000
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.000
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001

Loss after mini-batch	1361:	0.003
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001

Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.002
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001

Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.000
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.000
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.000
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.000
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.000
Loss after mini-batch	2661:	0.000
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.000
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.000
Loss after mini-batch	2761:	0.001
Loss after mini-batch	2771:	0.001
Loss after mini-batch	2781:	0.001
Loss after mini-batch	2791:	0.001

```

Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 30
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.000
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.000
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.000
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.002
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.000
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.000
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.000
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.000
Loss after mini-batch    381: 0.000
Loss after mini-batch    391: 0.001
Loss after mini-batch    401: 0.000
Loss after mini-batch    411: 0.000
Loss after mini-batch    421: 0.001
Loss after mini-batch    431: 0.001
Loss after mini-batch    441: 0.000

```

Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.000
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.000
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.002
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001

Loss after mini-batch	931:	0.000
Loss after mini-batch	941:	0.002
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.000
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.000
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.000
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.000
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.002
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.001

Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.002
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001

Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.002
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001

```

Loss after mini-batch 2371: 0.000
Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.000
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.002
Loss after mini-batch 2471: 0.002
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.000
Loss after mini-batch 2501: 0.000
Loss after mini-batch 2511: 0.000
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.000
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.000
Loss after mini-batch 2601: 0.000
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.000
Loss after mini-batch 2651: 0.000
Loss after mini-batch 2661: 0.000
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.002
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 31
Loss after mini-batch      1: 0.001
Loss after mini-batch     11: 0.001

```


Loss after mini-batch	21: 0.001
Loss after mini-batch	31: 0.001
Loss after mini-batch	41: 0.000
Loss after mini-batch	51: 0.000
Loss after mini-batch	61: 0.001
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.000
Loss after mini-batch	91: 0.000
Loss after mini-batch	101: 0.000
Loss after mini-batch	111: 0.000
Loss after mini-batch	121: 0.000
Loss after mini-batch	131: 0.000
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.000
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.000
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.000
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001

Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.000
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.002

Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.000
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.000
Loss after mini-batch	1081:	0.000
Loss after mini-batch	1091:	0.000
Loss after mini-batch	1101:	0.000
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.000
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.000
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.000
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001

Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001

Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001

```

Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.000
Loss after mini-batch 2441: 0.002
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.002
Loss after mini-batch 2481: 0.002
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.000
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.000
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.000
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.000
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 32
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.000

```

Loss after mini-batch	71: 0.000
Loss after mini-batch	81: 0.000
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.000
Loss after mini-batch	111: 0.000
Loss after mini-batch	121: 0.000
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.000
Loss after mini-batch	151: 0.000
Loss after mini-batch	161: 0.000
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.000
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.002
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.000
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.002
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.000
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.002
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001

Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.002
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000

Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.000
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.000
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.000
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.000
Loss after mini-batch	1201:	0.000
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001

Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001

Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.000
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.002
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001

```

Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.000
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.000
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.000
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.000
Starting epoch 33
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.000
Loss after mini-batch     31: 0.000
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.000

```

Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.000
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.000
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.002
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.000
Loss after mini-batch	291: 0.000
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.002
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.000
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001

Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.000
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.000
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.002
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001

Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.000
Loss after mini-batch	1191:	0.000
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.002
Loss after mini-batch	1251:	0.000
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.002
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.002
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001

Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.002
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.002
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.002
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.002
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001

Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.002
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.001

```

Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.000
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.000
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.002
Loss after mini-batch 2611: 0.000
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.000
Loss after mini-batch 2641: 0.000
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.000
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.000
Starting epoch 34
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.002
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.002
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.000
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001

```

Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.000
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.000
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.000
Loss after mini-batch	271: 0.000
Loss after mini-batch	281: 0.000
Loss after mini-batch	291: 0.000
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.000
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.000
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.003
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.002
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000

Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.002
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.002
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.000
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.000

Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.002
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.002
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.002
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001

Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001

Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.000
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.000
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.000
Loss after mini-batch	2501:	0.002
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001

```

Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.000
Loss after mini-batch 2591: 0.000
Loss after mini-batch 2601: 0.000
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.000
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 35
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.000
Loss after mini-batch    141: 0.000
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001

```


Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.000
Loss after mini-batch	241: 0.000
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.002
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.000
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.002
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001

Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.003
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.000
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.000
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.000
Loss after mini-batch	1091: 0.000
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.000
Loss after mini-batch	1171: 0.001

Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.000

Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.000
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001

Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.002
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.000
Loss after mini-batch	2431:	0.000
Loss after mini-batch	2441:	0.000
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.002
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.000

```

Loss after mini-batch 2621: 0.000
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.002
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.000
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.000
Starting epoch 36
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.000
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.000
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.000

```

Loss after mini-batch	271: 0.000
Loss after mini-batch	281: 0.000
Loss after mini-batch	291: 0.000
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.002
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.000
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.000
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.000
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000

Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.002
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.000
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.000
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.000
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.002
Loss after mini-batch	1131: 0.002
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.000
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.000
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.000
Loss after mini-batch	1211: 0.000
Loss after mini-batch	1221: 0.001

Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.000
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.002
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.000

Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.000
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000

Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.000
Loss after mini-batch	2431:	0.000
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.000
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.000
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.002
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001

```
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.002
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.000
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.000
Starting epoch 37
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.000
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.000
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.000
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.000
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.000
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
```

Loss after mini-batch	321: 0.002
Loss after mini-batch	331: 0.002
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.000
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.002
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.000
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000

Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.002
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.000
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.000
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.000
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.000
Loss after mini-batch	1111: 0.000
Loss after mini-batch	1121: 0.000
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.002
Loss after mini-batch	1171: 0.000
Loss after mini-batch	1181: 0.000
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.000
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.000
Loss after mini-batch	1231: 0.000
Loss after mini-batch	1241: 0.001
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001

Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001

Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001

Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.002
Loss after mini-batch	2421:	0.000
Loss after mini-batch	2431:	0.000
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.000
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.000
Loss after mini-batch	2591:	0.000
Loss after mini-batch	2601:	0.000
Loss after mini-batch	2611:	0.000
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.000
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.000
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.000
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001

```

Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.002
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 38
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.000
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.000
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.000
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.000
Loss after mini-batch    191: 0.000
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.000
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.000
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.000
Loss after mini-batch    331: 0.000
Loss after mini-batch    341: 0.001
Loss after mini-batch    351: 0.000
Loss after mini-batch    361: 0.001

```

Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.000
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.002
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.000
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.000
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.000
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.000
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001

Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.000
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.002
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.000
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.000
Loss after mini-batch	1051: 0.000
Loss after mini-batch	1061: 0.000
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.000
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.000
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.000
Loss after mini-batch	1281: 0.001
Loss after mini-batch	1291: 0.001
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.001
Loss after mini-batch	1321: 0.000

Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001

Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.002
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001

Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.000
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.000
Loss after mini-batch	2471:	0.000
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.000
Loss after mini-batch	2541:	0.000
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.000
Loss after mini-batch	2581:	0.000
Loss after mini-batch	2591:	0.000
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.000
Loss after mini-batch	2641:	0.000
Loss after mini-batch	2651:	0.000
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.000
Loss after mini-batch	2681:	0.000
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.000
Loss after mini-batch	2741:	0.000
Loss after mini-batch	2751:	0.000
Loss after mini-batch	2761:	0.001

```

Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.000
Starting epoch 39
Loss after mini-batch 1: 0.000
Loss after mini-batch 11: 0.001
Loss after mini-batch 21: 0.001
Loss after mini-batch 31: 0.001
Loss after mini-batch 41: 0.000
Loss after mini-batch 51: 0.001
Loss after mini-batch 61: 0.001
Loss after mini-batch 71: 0.001
Loss after mini-batch 81: 0.002
Loss after mini-batch 91: 0.001
Loss after mini-batch 101: 0.001
Loss after mini-batch 111: 0.001
Loss after mini-batch 121: 0.002
Loss after mini-batch 131: 0.001
Loss after mini-batch 141: 0.000
Loss after mini-batch 151: 0.000
Loss after mini-batch 161: 0.000
Loss after mini-batch 171: 0.001
Loss after mini-batch 181: 0.001
Loss after mini-batch 191: 0.001
Loss after mini-batch 201: 0.000
Loss after mini-batch 211: 0.000
Loss after mini-batch 221: 0.001
Loss after mini-batch 231: 0.001
Loss after mini-batch 241: 0.001
Loss after mini-batch 251: 0.001
Loss after mini-batch 261: 0.001
Loss after mini-batch 271: 0.001
Loss after mini-batch 281: 0.001
Loss after mini-batch 291: 0.001
Loss after mini-batch 301: 0.001
Loss after mini-batch 311: 0.000
Loss after mini-batch 321: 0.001
Loss after mini-batch 331: 0.001
Loss after mini-batch 341: 0.001
Loss after mini-batch 351: 0.000
Loss after mini-batch 361: 0.000
Loss after mini-batch 371: 0.000
Loss after mini-batch 381: 0.000
Loss after mini-batch 391: 0.001
Loss after mini-batch 401: 0.001
Loss after mini-batch 411: 0.001

```


Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.002
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.000
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.001

Loss after mini-batch	901:	0.000
Loss after mini-batch	911:	0.001
Loss after mini-batch	921:	0.001
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.000
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.000
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.000
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.000
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.002
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.000
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.000
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.000
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.000
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.000

Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.002
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001

Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.000

Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.000
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.000
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.002
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.000
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.002
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.000
Loss after mini-batch	2741:	0.001
Loss after mini-batch	2751:	0.001
Loss after mini-batch	2761:	0.001
Loss after mini-batch	2771:	0.002
Loss after mini-batch	2781:	0.001
Loss after mini-batch	2791:	0.001
Loss after mini-batch	2801:	0.001
Loss after mini-batch	2811:	0.001

Starting epoch 40

Loss after mini-batch	1:	0.000
Loss after mini-batch	11:	0.001
Loss after mini-batch	21:	0.000
Loss after mini-batch	31:	0.002
Loss after mini-batch	41:	0.001
Loss after mini-batch	51:	0.001
Loss after mini-batch	61:	0.001
Loss after mini-batch	71:	0.001
Loss after mini-batch	81:	0.001
Loss after mini-batch	91:	0.001
Loss after mini-batch	101:	0.001
Loss after mini-batch	111:	0.001
Loss after mini-batch	121:	0.001
Loss after mini-batch	131:	0.000
Loss after mini-batch	141:	0.000
Loss after mini-batch	151:	0.000
Loss after mini-batch	161:	0.000
Loss after mini-batch	171:	0.001
Loss after mini-batch	181:	0.001
Loss after mini-batch	191:	0.001
Loss after mini-batch	201:	0.001
Loss after mini-batch	211:	0.001
Loss after mini-batch	221:	0.000
Loss after mini-batch	231:	0.001
Loss after mini-batch	241:	0.000
Loss after mini-batch	251:	0.001
Loss after mini-batch	261:	0.001
Loss after mini-batch	271:	0.001
Loss after mini-batch	281:	0.001
Loss after mini-batch	291:	0.001
Loss after mini-batch	301:	0.000
Loss after mini-batch	311:	0.001
Loss after mini-batch	321:	0.001
Loss after mini-batch	331:	0.001
Loss after mini-batch	341:	0.001
Loss after mini-batch	351:	0.001
Loss after mini-batch	361:	0.001
Loss after mini-batch	371:	0.001
Loss after mini-batch	381:	0.001
Loss after mini-batch	391:	0.001
Loss after mini-batch	401:	0.001
Loss after mini-batch	411:	0.001
Loss after mini-batch	421:	0.001
Loss after mini-batch	431:	0.000
Loss after mini-batch	441:	0.001
Loss after mini-batch	451:	0.000
Loss after mini-batch	461:	0.001

Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000

Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.000
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.000
Loss after mini-batch	1041:	0.000
Loss after mini-batch	1051:	0.000
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.000
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001

Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001

Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.002
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.002
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.002
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001

```
Loss after mini-batch 2391: 0.000
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.002
Loss after mini-batch 2421: 0.002
Loss after mini-batch 2431: 0.001
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.000
Loss after mini-batch 2531: 0.002
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.000
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.000
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.000
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.000
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.000
Starting epoch 41
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.000
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.000
```

Loss after mini-batch	41: 0.001
Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.000
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.000
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.002
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.002
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.000
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.000
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.000

Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.002
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.000
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.000
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.002
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.000
Loss after mini-batch	981: 0.000
Loss after mini-batch	991: 0.000

Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.000
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.000
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.000
Loss after mini-batch	1231:	0.000
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001

Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.002
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001

Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.002
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001


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Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.001
Loss after mini-batch 2481: 0.000
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.000
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.002
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.002
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.000
Loss after mini-batch 2651: 0.000
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.000
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 42
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001

```

Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.001
Loss after mini-batch	121: 0.001
Loss after mini-batch	131: 0.001
Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.000
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.000
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.000
Loss after mini-batch	311: 0.000
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.002
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.000

Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.000
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.000
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.002
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001

Loss after mini-batch	1051:	0.000
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.000
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.000
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.002
Loss after mini-batch	1201:	0.002
Loss after mini-batch	1211:	0.000
Loss after mini-batch	1221:	0.000
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001

Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.002
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.000
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.002
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.000
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.000
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.000

Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.002
Loss after mini-batch	2481:	0.001

```

Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.001
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.000
Loss after mini-batch 2571: 0.001
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.000
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.002
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.000
Starting epoch 43
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.002
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.000
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.000
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.000

```

Loss after mini-batch	141: 0.001
Loss after mini-batch	151: 0.001
Loss after mini-batch	161: 0.001
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.001
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.002
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.000
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.000
Loss after mini-batch	291: 0.000
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.000
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.002
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.000
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001

Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.002
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.002
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.000

Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.001
Loss after mini-batch	1121:	0.001
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.000
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001

Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.002
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.000

Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.000
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.000
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.001

```

Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.001
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.000
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.000
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.000
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.000
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.000
Loss after mini-batch 2761: 0.000
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 44
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.002
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.000
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.000
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.000

```

Loss after mini-batch	191: 0.000
Loss after mini-batch	201: 0.001
Loss after mini-batch	211: 0.000
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.000
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.000
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.000
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.000
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.000
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.000
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.000
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.000
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.000
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.002
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001

Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.000
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.000
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.001
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.000
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.000
Loss after mini-batch	991: 0.000
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.000
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.000
Loss after mini-batch	1041: 0.000
Loss after mini-batch	1051: 0.000
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.000
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.002
Loss after mini-batch	1141: 0.000

Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.001
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.000
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.000
Loss after mini-batch	1241:	0.000
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.000
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.000
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.000
Loss after mini-batch	1621:	0.002

Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.000
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.000
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000

Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.002
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.000
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.002
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.002
Loss after mini-batch	2271:	0.002
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.000
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.002
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.000
Loss after mini-batch	2581:	0.001

```

Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.000
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.002
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.000
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.000
Starting epoch 45
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.000
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.000
Loss after mini-batch    111: 0.000
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.000
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.000
Loss after mini-batch    211: 0.000
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.000

```

Loss after mini-batch	241: 0.000
Loss after mini-batch	251: 0.000
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.002
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.001
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.002
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001

Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.000
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.000
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.000
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.000
Loss after mini-batch	1061: 0.000
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001

Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.000
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.002
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.000
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.002
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.000

Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.000
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.000
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001

Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.000
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.000
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.000
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.000
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.000
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.000
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.000
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.000
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.000
Loss after mini-batch	2631:	0.001


```

Loss after mini-batch 2641: 0.000
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.002
Loss after mini-batch 2691: 0.002
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.000
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 46
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.000
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.000
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.000
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.000
Loss after mini-batch    271: 0.000
Loss after mini-batch    281: 0.001

```

Loss after mini-batch	291: 0.001
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.000
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.001
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.000
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.000
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.000
Loss after mini-batch	611: 0.000
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.002
Loss after mini-batch	661: 0.000
Loss after mini-batch	671: 0.000
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001

Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.000
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.000
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.000
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.000
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.000
Loss after mini-batch	1131: 0.000
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.000
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.000
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.001

Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.000
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.000
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.002
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.000
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001

Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.001
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.003
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.002
Loss after mini-batch	1871:	0.001
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.000
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.000
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.000
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.000
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.000

Loss after mini-batch	2211:	0.002
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.000
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.000
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.000
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.000
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.000
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.001
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.000
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.000
Loss after mini-batch	2661:	0.000
Loss after mini-batch	2671:	0.001
Loss after mini-batch	2681:	0.000

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Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.000
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.002
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.000
Starting epoch 47
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.000
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.000
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.000
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.000
Loss after mini-batch    151: 0.001
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.001
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.000
Loss after mini-batch    201: 0.000
Loss after mini-batch    211: 0.000
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.000
Loss after mini-batch    331: 0.001

```

Loss after mini-batch	341: 0.000
Loss after mini-batch	351: 0.001
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.001
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.000
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.000
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.000
Loss after mini-batch	741: 0.000
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.001

Loss after mini-batch	821: 0.000
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.000
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.000
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.000
Loss after mini-batch	1021: 0.000
Loss after mini-batch	1031: 0.001
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.000
Loss after mini-batch	1081: 0.000
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.001
Loss after mini-batch	1121: 0.001
Loss after mini-batch	1131: 0.001
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.001
Loss after mini-batch	1201: 0.001
Loss after mini-batch	1211: 0.001
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.001
Loss after mini-batch	1241: 0.002
Loss after mini-batch	1251: 0.001
Loss after mini-batch	1261: 0.001
Loss after mini-batch	1271: 0.001
Loss after mini-batch	1281: 0.001
Loss after mini-batch	1291: 0.001

Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.001
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.000
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.000
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.000
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.001

Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.000
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.001
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.001
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.000
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.000
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.000
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.000
Loss after mini-batch	2121:	0.002
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.002
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.000
Loss after mini-batch	2241:	0.000
Loss after mini-batch	2251:	0.001

Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.000
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.000
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.000
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.001
Loss after mini-batch	2421:	0.000
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.000
Loss after mini-batch	2451:	0.000
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.001
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.001
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.001
Loss after mini-batch	2531:	0.001
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.000
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.001
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.001
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.000
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.001
Loss after mini-batch	2701:	0.000
Loss after mini-batch	2711:	0.002
Loss after mini-batch	2721:	0.001
Loss after mini-batch	2731:	0.001

```

Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.002
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.000
Loss after mini-batch 2811: 0.001
Starting epoch 48
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.001
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.001
Loss after mini-batch     61: 0.001
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.000
Loss after mini-batch     91: 0.002
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.000
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.000
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.000
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.002
Loss after mini-batch    301: 0.001
Loss after mini-batch    311: 0.000
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.000
Loss after mini-batch    341: 0.000
Loss after mini-batch    351: 0.001
Loss after mini-batch    361: 0.001
Loss after mini-batch    371: 0.001
Loss after mini-batch    381: 0.000

```

Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.001
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.000
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.001
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.001
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.000
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.001
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.000
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.000
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.000
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.002
Loss after mini-batch	731: 0.000
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.000
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.001

Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.001
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.001
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.000
Loss after mini-batch	971: 0.001
Loss after mini-batch	981: 0.001
Loss after mini-batch	991: 0.001
Loss after mini-batch	1001: 0.001
Loss after mini-batch	1011: 0.001
Loss after mini-batch	1021: 0.001
Loss after mini-batch	1031: 0.000
Loss after mini-batch	1041: 0.001
Loss after mini-batch	1051: 0.001
Loss after mini-batch	1061: 0.001
Loss after mini-batch	1071: 0.001
Loss after mini-batch	1081: 0.001
Loss after mini-batch	1091: 0.001
Loss after mini-batch	1101: 0.001
Loss after mini-batch	1111: 0.000
Loss after mini-batch	1121: 0.000
Loss after mini-batch	1131: 0.000
Loss after mini-batch	1141: 0.001
Loss after mini-batch	1151: 0.001
Loss after mini-batch	1161: 0.001
Loss after mini-batch	1171: 0.001
Loss after mini-batch	1181: 0.001
Loss after mini-batch	1191: 0.000
Loss after mini-batch	1201: 0.000
Loss after mini-batch	1211: 0.000
Loss after mini-batch	1221: 0.001
Loss after mini-batch	1231: 0.000
Loss after mini-batch	1241: 0.000
Loss after mini-batch	1251: 0.000
Loss after mini-batch	1261: 0.000
Loss after mini-batch	1271: 0.000
Loss after mini-batch	1281: 0.001
Loss after mini-batch	1291: 0.001
Loss after mini-batch	1301: 0.001
Loss after mini-batch	1311: 0.001
Loss after mini-batch	1321: 0.001
Loss after mini-batch	1331: 0.001
Loss after mini-batch	1341: 0.001

Loss after mini-batch	1351:	0.000
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.002
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.000
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.000
Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.000
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.000
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.001
Loss after mini-batch	1661:	0.000
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.001
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.002
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.000
Loss after mini-batch	1781:	0.002
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.001

Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.000
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.001
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.000
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.000
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.000
Loss after mini-batch	2301:	0.000

Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.001
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001
Loss after mini-batch	2411:	0.000
Loss after mini-batch	2421:	0.001
Loss after mini-batch	2431:	0.001
Loss after mini-batch	2441:	0.001
Loss after mini-batch	2451:	0.001
Loss after mini-batch	2461:	0.001
Loss after mini-batch	2471:	0.001
Loss after mini-batch	2481:	0.000
Loss after mini-batch	2491:	0.001
Loss after mini-batch	2501:	0.000
Loss after mini-batch	2511:	0.000
Loss after mini-batch	2521:	0.000
Loss after mini-batch	2531:	0.000
Loss after mini-batch	2541:	0.001
Loss after mini-batch	2551:	0.001
Loss after mini-batch	2561:	0.001
Loss after mini-batch	2571:	0.000
Loss after mini-batch	2581:	0.001
Loss after mini-batch	2591:	0.001
Loss after mini-batch	2601:	0.001
Loss after mini-batch	2611:	0.001
Loss after mini-batch	2621:	0.001
Loss after mini-batch	2631:	0.001
Loss after mini-batch	2641:	0.001
Loss after mini-batch	2651:	0.002
Loss after mini-batch	2661:	0.001
Loss after mini-batch	2671:	0.000
Loss after mini-batch	2681:	0.001
Loss after mini-batch	2691:	0.000
Loss after mini-batch	2701:	0.001
Loss after mini-batch	2711:	0.001
Loss after mini-batch	2721:	0.002
Loss after mini-batch	2731:	0.001
Loss after mini-batch	2741:	0.000
Loss after mini-batch	2751:	0.001
Loss after mini-batch	2761:	0.001
Loss after mini-batch	2771:	0.001
Loss after mini-batch	2781:	0.001

```
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 49
Loss after mini-batch      1: 0.000
Loss after mini-batch     11: 0.001
Loss after mini-batch     21: 0.001
Loss after mini-batch     31: 0.000
Loss after mini-batch     41: 0.001
Loss after mini-batch     51: 0.000
Loss after mini-batch     61: 0.000
Loss after mini-batch     71: 0.001
Loss after mini-batch     81: 0.001
Loss after mini-batch     91: 0.001
Loss after mini-batch    101: 0.001
Loss after mini-batch    111: 0.001
Loss after mini-batch    121: 0.001
Loss after mini-batch    131: 0.001
Loss after mini-batch    141: 0.001
Loss after mini-batch    151: 0.000
Loss after mini-batch    161: 0.001
Loss after mini-batch    171: 0.000
Loss after mini-batch    181: 0.001
Loss after mini-batch    191: 0.001
Loss after mini-batch    201: 0.001
Loss after mini-batch    211: 0.001
Loss after mini-batch    221: 0.001
Loss after mini-batch    231: 0.001
Loss after mini-batch    241: 0.001
Loss after mini-batch    251: 0.001
Loss after mini-batch    261: 0.001
Loss after mini-batch    271: 0.001
Loss after mini-batch    281: 0.001
Loss after mini-batch    291: 0.001
Loss after mini-batch    301: 0.000
Loss after mini-batch    311: 0.001
Loss after mini-batch    321: 0.001
Loss after mini-batch    331: 0.001
Loss after mini-batch    341: 0.000
Loss after mini-batch    351: 0.000
Loss after mini-batch    361: 0.000
Loss after mini-batch    371: 0.000
Loss after mini-batch    381: 0.001
Loss after mini-batch    391: 0.001
Loss after mini-batch    401: 0.001
Loss after mini-batch    411: 0.000
Loss after mini-batch    421: 0.001
Loss after mini-batch    431: 0.000
```

Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.000
Loss after mini-batch	481: 0.000
Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.000
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.000
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.000
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.002
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.000
Loss after mini-batch	661: 0.001
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.001
Loss after mini-batch	721: 0.001
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.002
Loss after mini-batch	751: 0.001
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.001
Loss after mini-batch	791: 0.001
Loss after mini-batch	801: 0.001
Loss after mini-batch	811: 0.001
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.000
Loss after mini-batch	851: 0.000
Loss after mini-batch	861: 0.000
Loss after mini-batch	871: 0.001
Loss after mini-batch	881: 0.000
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.001

Loss after mini-batch	921:	0.000
Loss after mini-batch	931:	0.001
Loss after mini-batch	941:	0.001
Loss after mini-batch	951:	0.001
Loss after mini-batch	961:	0.001
Loss after mini-batch	971:	0.002
Loss after mini-batch	981:	0.001
Loss after mini-batch	991:	0.000
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.001
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.000
Loss after mini-batch	1071:	0.001
Loss after mini-batch	1081:	0.001
Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.001
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.000
Loss after mini-batch	1161:	0.002
Loss after mini-batch	1171:	0.002
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
Loss after mini-batch	1211:	0.001
Loss after mini-batch	1221:	0.001
Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.000
Loss after mini-batch	1271:	0.000
Loss after mini-batch	1281:	0.000
Loss after mini-batch	1291:	0.001
Loss after mini-batch	1301:	0.000
Loss after mini-batch	1311:	0.001
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.000
Loss after mini-batch	1341:	0.002
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.000
Loss after mini-batch	1371:	0.001
Loss after mini-batch	1381:	0.000
Loss after mini-batch	1391:	0.000

Loss after mini-batch	1401:	0.000
Loss after mini-batch	1411:	0.001
Loss after mini-batch	1421:	0.001
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001
Loss after mini-batch	1451:	0.000
Loss after mini-batch	1461:	0.001
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.001
Loss after mini-batch	1491:	0.001
Loss after mini-batch	1501:	0.001
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.000
Loss after mini-batch	1561:	0.001
Loss after mini-batch	1571:	0.000
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.000
Loss after mini-batch	1601:	0.000
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.001
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.001
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.000
Loss after mini-batch	1711:	0.000
Loss after mini-batch	1721:	0.000
Loss after mini-batch	1731:	0.000
Loss after mini-batch	1741:	0.000
Loss after mini-batch	1751:	0.001
Loss after mini-batch	1761:	0.000
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.001
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.000
Loss after mini-batch	1821:	0.001
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.000
Loss after mini-batch	1851:	0.000
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.001

Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.000
Loss after mini-batch	1901:	0.000
Loss after mini-batch	1911:	0.000
Loss after mini-batch	1921:	0.001
Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.001
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.001
Loss after mini-batch	2001:	0.001
Loss after mini-batch	2011:	0.000
Loss after mini-batch	2021:	0.002
Loss after mini-batch	2031:	0.002
Loss after mini-batch	2041:	0.001
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.000
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.000
Loss after mini-batch	2091:	0.001
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.000
Loss after mini-batch	2131:	0.000
Loss after mini-batch	2141:	0.001
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.001
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.001
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.000
Loss after mini-batch	2271:	0.000
Loss after mini-batch	2281:	0.001
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.001
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.001

Loss after mini-batch 2361: 0.001
Loss after mini-batch 2371: 0.000
Loss after mini-batch 2381: 0.001
Loss after mini-batch 2391: 0.001
Loss after mini-batch 2401: 0.001
Loss after mini-batch 2411: 0.001
Loss after mini-batch 2421: 0.000
Loss after mini-batch 2431: 0.000
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.001
Loss after mini-batch 2461: 0.001
Loss after mini-batch 2471: 0.000
Loss after mini-batch 2481: 0.000
Loss after mini-batch 2491: 0.001
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.000
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.001
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.000
Loss after mini-batch 2591: 0.000
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.000
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.002
Loss after mini-batch 2671: 0.001
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.001
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.000
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.001
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Starting epoch 50
Loss after mini-batch 1: 0.000

Loss after mini-batch	11: 0.000
Loss after mini-batch	21: 0.001
Loss after mini-batch	31: 0.001
Loss after mini-batch	41: 0.001
Loss after mini-batch	51: 0.001
Loss after mini-batch	61: 0.001
Loss after mini-batch	71: 0.001
Loss after mini-batch	81: 0.000
Loss after mini-batch	91: 0.001
Loss after mini-batch	101: 0.001
Loss after mini-batch	111: 0.000
Loss after mini-batch	121: 0.000
Loss after mini-batch	131: 0.000
Loss after mini-batch	141: 0.000
Loss after mini-batch	151: 0.000
Loss after mini-batch	161: 0.000
Loss after mini-batch	171: 0.001
Loss after mini-batch	181: 0.000
Loss after mini-batch	191: 0.001
Loss after mini-batch	201: 0.000
Loss after mini-batch	211: 0.001
Loss after mini-batch	221: 0.001
Loss after mini-batch	231: 0.001
Loss after mini-batch	241: 0.001
Loss after mini-batch	251: 0.001
Loss after mini-batch	261: 0.001
Loss after mini-batch	271: 0.001
Loss after mini-batch	281: 0.001
Loss after mini-batch	291: 0.000
Loss after mini-batch	301: 0.001
Loss after mini-batch	311: 0.001
Loss after mini-batch	321: 0.001
Loss after mini-batch	331: 0.001
Loss after mini-batch	341: 0.001
Loss after mini-batch	351: 0.000
Loss after mini-batch	361: 0.001
Loss after mini-batch	371: 0.001
Loss after mini-batch	381: 0.000
Loss after mini-batch	391: 0.001
Loss after mini-batch	401: 0.000
Loss after mini-batch	411: 0.000
Loss after mini-batch	421: 0.001
Loss after mini-batch	431: 0.002
Loss after mini-batch	441: 0.001
Loss after mini-batch	451: 0.000
Loss after mini-batch	461: 0.001
Loss after mini-batch	471: 0.001
Loss after mini-batch	481: 0.001

Loss after mini-batch	491: 0.001
Loss after mini-batch	501: 0.001
Loss after mini-batch	511: 0.001
Loss after mini-batch	521: 0.001
Loss after mini-batch	531: 0.001
Loss after mini-batch	541: 0.001
Loss after mini-batch	551: 0.001
Loss after mini-batch	561: 0.001
Loss after mini-batch	571: 0.000
Loss after mini-batch	581: 0.001
Loss after mini-batch	591: 0.001
Loss after mini-batch	601: 0.001
Loss after mini-batch	611: 0.001
Loss after mini-batch	621: 0.001
Loss after mini-batch	631: 0.001
Loss after mini-batch	641: 0.001
Loss after mini-batch	651: 0.001
Loss after mini-batch	661: 0.000
Loss after mini-batch	671: 0.001
Loss after mini-batch	681: 0.001
Loss after mini-batch	691: 0.001
Loss after mini-batch	701: 0.001
Loss after mini-batch	711: 0.000
Loss after mini-batch	721: 0.000
Loss after mini-batch	731: 0.001
Loss after mini-batch	741: 0.001
Loss after mini-batch	751: 0.000
Loss after mini-batch	761: 0.001
Loss after mini-batch	771: 0.001
Loss after mini-batch	781: 0.000
Loss after mini-batch	791: 0.000
Loss after mini-batch	801: 0.000
Loss after mini-batch	811: 0.000
Loss after mini-batch	821: 0.001
Loss after mini-batch	831: 0.001
Loss after mini-batch	841: 0.001
Loss after mini-batch	851: 0.001
Loss after mini-batch	861: 0.001
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Loss after mini-batch	881: 0.001
Loss after mini-batch	891: 0.000
Loss after mini-batch	901: 0.000
Loss after mini-batch	911: 0.001
Loss after mini-batch	921: 0.000
Loss after mini-batch	931: 0.001
Loss after mini-batch	941: 0.001
Loss after mini-batch	951: 0.001
Loss after mini-batch	961: 0.001

Loss after mini-batch	971:	0.001
Loss after mini-batch	981:	0.000
Loss after mini-batch	991:	0.001
Loss after mini-batch	1001:	0.001
Loss after mini-batch	1011:	0.001
Loss after mini-batch	1021:	0.002
Loss after mini-batch	1031:	0.001
Loss after mini-batch	1041:	0.001
Loss after mini-batch	1051:	0.001
Loss after mini-batch	1061:	0.001
Loss after mini-batch	1071:	0.001
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Loss after mini-batch	1091:	0.001
Loss after mini-batch	1101:	0.000
Loss after mini-batch	1111:	0.000
Loss after mini-batch	1121:	0.000
Loss after mini-batch	1131:	0.001
Loss after mini-batch	1141:	0.001
Loss after mini-batch	1151:	0.001
Loss after mini-batch	1161:	0.000
Loss after mini-batch	1171:	0.001
Loss after mini-batch	1181:	0.001
Loss after mini-batch	1191:	0.001
Loss after mini-batch	1201:	0.001
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Loss after mini-batch	1231:	0.001
Loss after mini-batch	1241:	0.001
Loss after mini-batch	1251:	0.001
Loss after mini-batch	1261:	0.001
Loss after mini-batch	1271:	0.001
Loss after mini-batch	1281:	0.001
Loss after mini-batch	1291:	0.000
Loss after mini-batch	1301:	0.001
Loss after mini-batch	1311:	0.000
Loss after mini-batch	1321:	0.001
Loss after mini-batch	1331:	0.001
Loss after mini-batch	1341:	0.000
Loss after mini-batch	1351:	0.001
Loss after mini-batch	1361:	0.001
Loss after mini-batch	1371:	0.000
Loss after mini-batch	1381:	0.001
Loss after mini-batch	1391:	0.001
Loss after mini-batch	1401:	0.001
Loss after mini-batch	1411:	0.000
Loss after mini-batch	1421:	0.002
Loss after mini-batch	1431:	0.001
Loss after mini-batch	1441:	0.001

Loss after mini-batch	1451:	0.001
Loss after mini-batch	1461:	0.000
Loss after mini-batch	1471:	0.001
Loss after mini-batch	1481:	0.000
Loss after mini-batch	1491:	0.000
Loss after mini-batch	1501:	0.000
Loss after mini-batch	1511:	0.001
Loss after mini-batch	1521:	0.001
Loss after mini-batch	1531:	0.001
Loss after mini-batch	1541:	0.001
Loss after mini-batch	1551:	0.001
Loss after mini-batch	1561:	0.000
Loss after mini-batch	1571:	0.001
Loss after mini-batch	1581:	0.001
Loss after mini-batch	1591:	0.001
Loss after mini-batch	1601:	0.001
Loss after mini-batch	1611:	0.001
Loss after mini-batch	1621:	0.001
Loss after mini-batch	1631:	0.001
Loss after mini-batch	1641:	0.000
Loss after mini-batch	1651:	0.000
Loss after mini-batch	1661:	0.001
Loss after mini-batch	1671:	0.000
Loss after mini-batch	1681:	0.001
Loss after mini-batch	1691:	0.000
Loss after mini-batch	1701:	0.001
Loss after mini-batch	1711:	0.001
Loss after mini-batch	1721:	0.001
Loss after mini-batch	1731:	0.001
Loss after mini-batch	1741:	0.001
Loss after mini-batch	1751:	0.000
Loss after mini-batch	1761:	0.001
Loss after mini-batch	1771:	0.001
Loss after mini-batch	1781:	0.000
Loss after mini-batch	1791:	0.001
Loss after mini-batch	1801:	0.000
Loss after mini-batch	1811:	0.001
Loss after mini-batch	1821:	0.000
Loss after mini-batch	1831:	0.001
Loss after mini-batch	1841:	0.001
Loss after mini-batch	1851:	0.001
Loss after mini-batch	1861:	0.000
Loss after mini-batch	1871:	0.000
Loss after mini-batch	1881:	0.000
Loss after mini-batch	1891:	0.001
Loss after mini-batch	1901:	0.001
Loss after mini-batch	1911:	0.001
Loss after mini-batch	1921:	0.001

Loss after mini-batch	1931:	0.001
Loss after mini-batch	1941:	0.001
Loss after mini-batch	1951:	0.001
Loss after mini-batch	1961:	0.000
Loss after mini-batch	1971:	0.001
Loss after mini-batch	1981:	0.001
Loss after mini-batch	1991:	0.000
Loss after mini-batch	2001:	0.000
Loss after mini-batch	2011:	0.001
Loss after mini-batch	2021:	0.001
Loss after mini-batch	2031:	0.001
Loss after mini-batch	2041:	0.000
Loss after mini-batch	2051:	0.001
Loss after mini-batch	2061:	0.001
Loss after mini-batch	2071:	0.001
Loss after mini-batch	2081:	0.001
Loss after mini-batch	2091:	0.000
Loss after mini-batch	2101:	0.001
Loss after mini-batch	2111:	0.001
Loss after mini-batch	2121:	0.001
Loss after mini-batch	2131:	0.001
Loss after mini-batch	2141:	0.000
Loss after mini-batch	2151:	0.001
Loss after mini-batch	2161:	0.001
Loss after mini-batch	2171:	0.000
Loss after mini-batch	2181:	0.001
Loss after mini-batch	2191:	0.000
Loss after mini-batch	2201:	0.001
Loss after mini-batch	2211:	0.001
Loss after mini-batch	2221:	0.000
Loss after mini-batch	2231:	0.001
Loss after mini-batch	2241:	0.001
Loss after mini-batch	2251:	0.001
Loss after mini-batch	2261:	0.001
Loss after mini-batch	2271:	0.001
Loss after mini-batch	2281:	0.000
Loss after mini-batch	2291:	0.001
Loss after mini-batch	2301:	0.001
Loss after mini-batch	2311:	0.001
Loss after mini-batch	2321:	0.000
Loss after mini-batch	2331:	0.000
Loss after mini-batch	2341:	0.001
Loss after mini-batch	2351:	0.000
Loss after mini-batch	2361:	0.001
Loss after mini-batch	2371:	0.001
Loss after mini-batch	2381:	0.001
Loss after mini-batch	2391:	0.001
Loss after mini-batch	2401:	0.001

Loss after mini-batch 2411: 0.001
Loss after mini-batch 2421: 0.001
Loss after mini-batch 2431: 0.000
Loss after mini-batch 2441: 0.001
Loss after mini-batch 2451: 0.000
Loss after mini-batch 2461: 0.000
Loss after mini-batch 2471: 0.000
Loss after mini-batch 2481: 0.001
Loss after mini-batch 2491: 0.000
Loss after mini-batch 2501: 0.001
Loss after mini-batch 2511: 0.000
Loss after mini-batch 2521: 0.001
Loss after mini-batch 2531: 0.001
Loss after mini-batch 2541: 0.001
Loss after mini-batch 2551: 0.000
Loss after mini-batch 2561: 0.001
Loss after mini-batch 2571: 0.000
Loss after mini-batch 2581: 0.000
Loss after mini-batch 2591: 0.001
Loss after mini-batch 2601: 0.001
Loss after mini-batch 2611: 0.001
Loss after mini-batch 2621: 0.001
Loss after mini-batch 2631: 0.001
Loss after mini-batch 2641: 0.001
Loss after mini-batch 2651: 0.001
Loss after mini-batch 2661: 0.001
Loss after mini-batch 2671: 0.000
Loss after mini-batch 2681: 0.001
Loss after mini-batch 2691: 0.000
Loss after mini-batch 2701: 0.001
Loss after mini-batch 2711: 0.001
Loss after mini-batch 2721: 0.001
Loss after mini-batch 2731: 0.001
Loss after mini-batch 2741: 0.001
Loss after mini-batch 2751: 0.001
Loss after mini-batch 2761: 0.001
Loss after mini-batch 2771: 0.001
Loss after mini-batch 2781: 0.001
Loss after mini-batch 2791: 0.000
Loss after mini-batch 2801: 0.001
Loss after mini-batch 2811: 0.001
Training process has finished.

Calculate error for test
Result: 3.811153447359363e-05
Result: 9.125097411374439e-15
Result: 6.473551775648633e-07
Calculate error for train

Result: 3.642748418361822e-05
Result: 8.808458600586814e-15
Result: 6.2277136268572e-07

```
[14]: def splitErrorList(errorList):  
    maxEnergyError = []  
    totalEnergyError = []  
    avgEnergyError = []  
  
    for element in errorList:  
        maxEnergyError.append(element[0])  
        totalEnergyError.append(element[1])  
        avgEnergyError.append(element[2])  
  
    return maxEnergyError, totalEnergyError, avgEnergyError
```

```
[15]: print(model1LayerMSE)  
print(model1LayerPercentError)  
print('\n')  
print(trainMSE)  
print(trainPercent)  
  
maxEnergyMSE, totalEnergyMSE, avgEnergyMSE = splitErrorList(model1LayerMSE)  
maxEnergyPercent, totalEnergyPercent, avgEnergyPercent =  
    ↪splitErrorList(model1LayerPercentError)  
  
trainMaxMSE, trainTotalMSE, trainAvgMSE = splitErrorList(trainMSE)  
trainMaxPercent, trainTotalPercent, trainAvgPercent =  
    ↪splitErrorList(trainPercent)  
  
print(trainMaxMSE)  
print(maxEnergyMSE)
```

```
[[5.6978141831636326e-06, 1.826553267105639e-15, 1.328771315295793e-07],  
[1.8739067296662588e-05, 2.733749983124259e-15, 2.9702573796996083e-07],  
[8.479282063237006e-06, 2.7615405287048097e-15, 1.619183970067513e-07],  
[1.0995086988557976e-05, 9.972341754381332e-16, 1.719939080727756e-07],  
[2.8987754719841756e-05, 1.737798069415805e-14, 6.226525531170417e-07],  
[3.811153447359363e-05, 9.125097411374439e-15, 6.473551775648633e-07]]  
[[9.003389914677687, 13.435528497275815, 8.41432986321646], [8.229353694367378,  
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13.389491215689986], [12.290295881148435, 27.775826795091845,  
13.318004522922582], [10.244809549320886, 20.453482240665874,  
10.028581486654229]]
```

```
[[5.751722253465613e-06, 1.780939927964189e-15, 1.3323290120690164e-07],
```

```
[1.828420918622595e-05, 2.6569664252781055e-15, 2.891211371696739e-07],
[8.695034595673081e-06, 2.8894699096341713e-15, 1.6507651750966625e-07],
[1.0599116096144169e-05, 9.641282600677242e-16, 1.704618137662063e-07],
[2.83641189786924e-05, 1.6860413089303032e-14, 6.108775835135749e-07],
[3.642748418361822e-05, 8.808458600586814e-15, 6.2277136268572e-07]]
[[9.015938568583993, 13.394521918192227, 8.431306938419633], [8.332530474486012,
14.484349383642732, 8.34720319605813], [6.823004087913909, 14.82851827294791,
6.9169207286747305], [13.02273840798426, 26.95252326352471, 13.595258209252734],
[12.450156375686381, 27.939170256440573, 13.487716244304735],
[10.301865789157581, 20.60843686266765, 10.102637494557515]]
[5.751722253465613e-06, 1.828420918622595e-05, 8.695034595673081e-06,
1.0599116096144169e-05, 2.83641189786924e-05, 3.642748418361822e-05]
[5.6978141831636326e-06, 1.8739067296662588e-05, 8.479282063237006e-06,
1.0995086988557976e-05, 2.8987754719841756e-05, 3.811153447359363e-05]
```

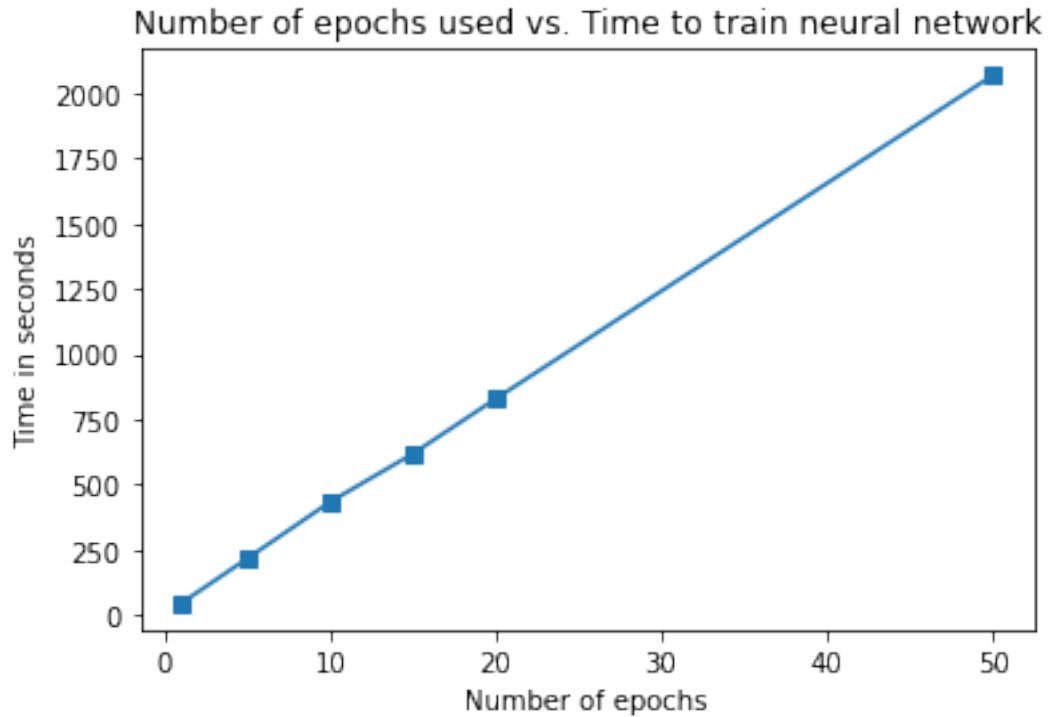
4 Now plot errors and running time

```
[16]: %matplotlib inline
import matplotlib.pyplot as plt

#Time spent plot
fig = plt.figure()
ax1 = fig.add_subplot(1,1,1)

plt.plot(epochList, timeList, marker='s')
plt.title("Number of epochs used vs. Time to train neural network")
plt.xlabel("Number of epochs")
plt.ylabel("Time in seconds")

#plt.legend(loc='upper left');
plt.show()
```

```
[17]: for epochElement, timeElement in zip(epochList, timeList):  
  
    minuteValue = timeElement / 60  
  
    print("Number of epochs:", epochElement)  
    print("Time spent:", minuteValue, "minutes", '\n')
```

```
Number of epochs: 1  
Time spent: 0.7480666995048523 minutes
```

```
Number of epochs: 5  
Time spent: 3.6164168039957683 minutes
```

```
Number of epochs: 10  
Time spent: 7.232774639129639 minutes
```

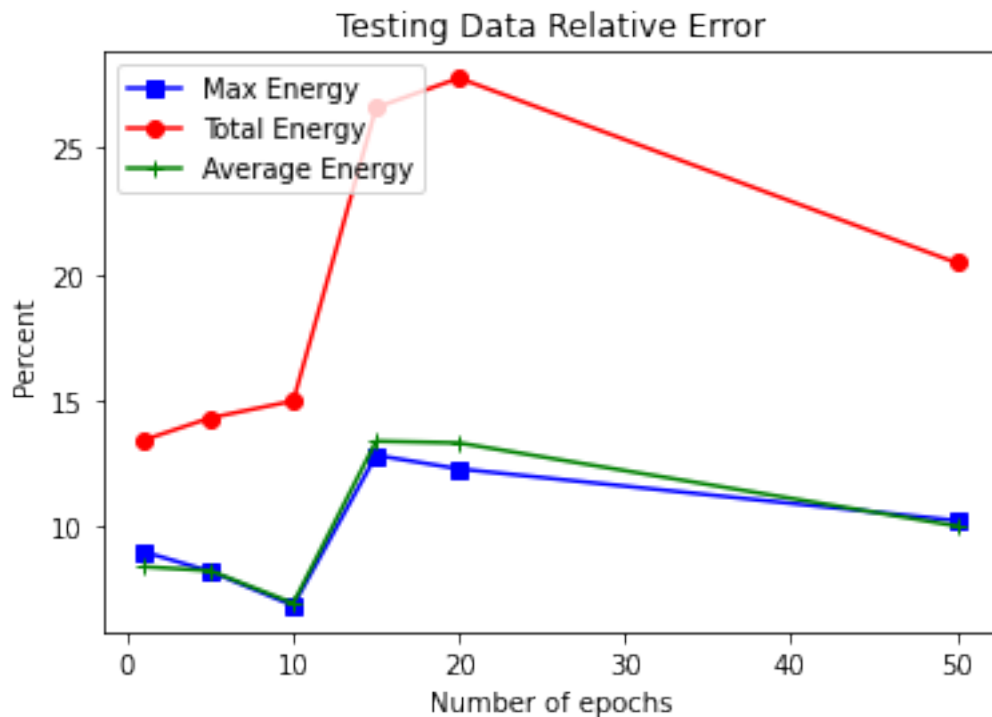
```
Number of epochs: 15  
Time spent: 10.31501669883728 minutes
```

```
Number of epochs: 20  
Time spent: 13.82526669104894 minutes
```

```
Number of epochs: 50  
Time spent: 34.48906991481781 minutes
```

```
[18]: #Percent Error plot
fig = plt.figure()
ax1 = fig.add_subplot(1,1,1)

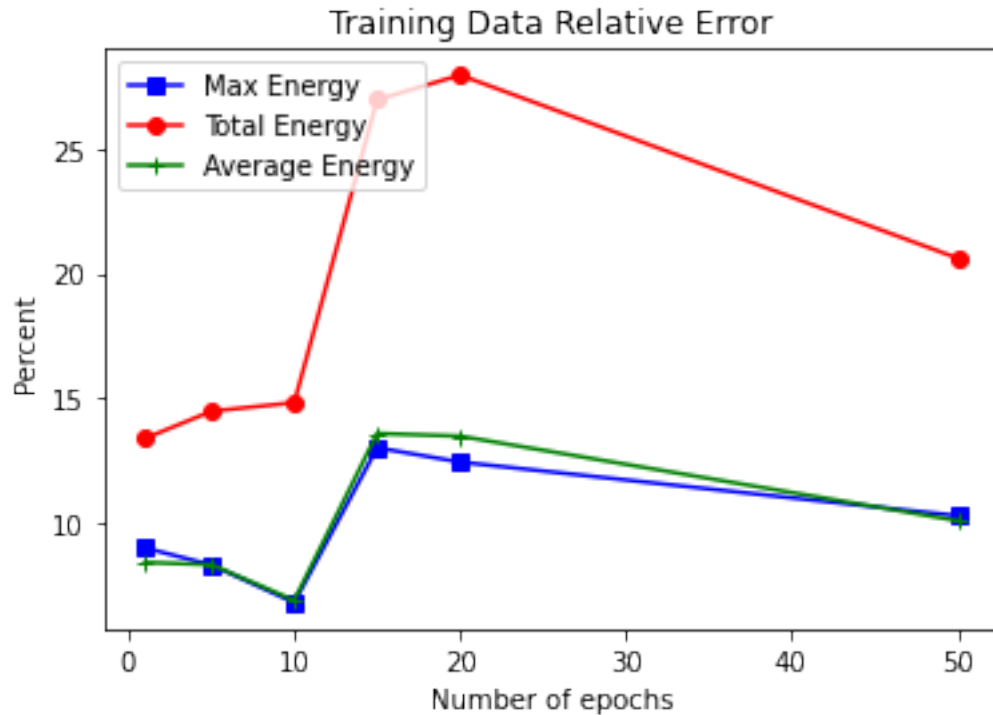
plt.plot(epochList, maxEnergyPercent, c='b', marker="s", label='Max Energy')
plt.plot(epochList, totalEnergyPercent, c='r', marker="o", label='Total Energy')
plt.plot(epochList, avgEnergyPercent, c='g', marker='+', label='Average Energy')
plt.title("Testing Data Relative Error")
plt.xlabel("Number of epochs")
plt.ylabel("Percent")
plt.legend(loc='upper left');
plt.show()
```



```
[19]: #Percent Error plot for training data
fig = plt.figure()
ax1 = fig.add_subplot(1,1,1)

plt.plot(epochList, trainMaxPercent, c='b', marker="s", label='Max Energy')
plt.plot(epochList, trainTotalPercent, c='r', marker="o", label='Total Energy')
plt.plot(epochList, trainAvgPercent, c='g', marker='+', label='Average Energy')
plt.title("Training Data Relative Error")
```

```
plt.xlabel("Number of epochs")
plt.ylabel("Percent")
plt.legend(loc='upper left');
plt.show()
```



```
[20]: #Compare errors of train and test using just the max energy % error

fig = plt.figure()
#ax1 = fig.add_subplot(1,1,1)

plt.plot(epochList, trainMaxPercent, c='b', marker="s", label='Training Data')
plt.plot(epochList, maxEnergyPercent, c='r', marker="s", label='Testing Data')

plt.title("Testing vs. Training Data Error")
plt.xlabel("Number of epochs")
plt.ylabel("Max Energy Percent Error")
plt.legend(loc='upper left')
plt.show()
```



```
[21]: for epoch, maxError, totalError, avgError in zip(epochList, maxEnergyPercent,
    ↪totalEnergyPercent, avgEnergyPercent):
    print("Number of epochs:", epoch)
    print("Max energy percent error:", maxError)
    print("Total energy percent error:", totalError)
    print("Average energy percent error:", avgError, '\n')
```

```
Number of epochs: 1
Max energy percent error: 9.003389914677687
Total energy percent error: 13.435528497275815
Average energy percent error: 8.41432986321646
```

```
Number of epochs: 5
Max energy percent error: 8.229353694367378
Total energy percent error: 14.313656050329719
Average energy percent error: 8.255411196914693
```

```
Number of epochs: 10
Max energy percent error: 6.871202907559728
Total energy percent error: 14.982273992363268
Average energy percent error: 6.968154810180534
```

```
Number of epochs: 15
Max energy percent error: 12.829914110043587
```

Total energy percent error: 26.607821593869424
Average energy percent error: 13.389491215689986

Number of epochs: 20
Max energy percent error: 12.290295881148435
Total energy percent error: 27.775826795091845
Average energy percent error: 13.318004522922582

Number of epochs: 50
Max energy percent error: 10.244809549320886
Total energy percent error: 20.453482240665874
Average energy percent error: 10.028581486654229

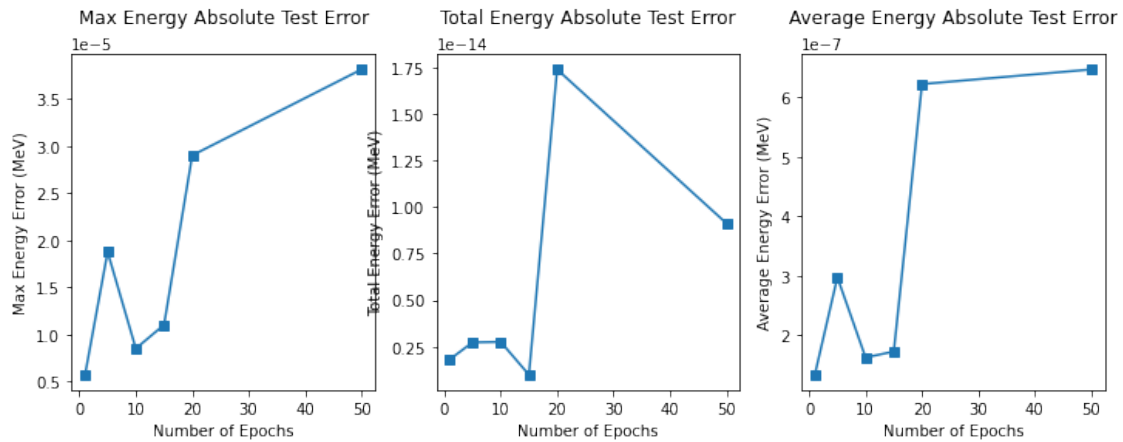
```
[22]: fig = plt.figure(figsize = (12, 4))

plt.subplot(1, 3, 1)
plt.plot(epochList, maxEnergyMSE, marker = 's')
plt.title("Max Energy Absolute Test Error", pad = 20)
plt.xlabel('Number of Epochs')
plt.ylabel('Max Energy Error (MeV)')

plt.subplot(1, 3, 2)
plt.plot(epochList, totalEnergyMSE, marker = 's')
plt.title("Total Energy Absolute Test Error", pad = 20)
plt.xlabel('Number of Epochs')
plt.ylabel('Total Energy Error (MeV)')

plt.subplot(1, 3, 3)
plt.plot(epochList, avgEnergyMSE, marker = 's')
plt.title("Average Energy Absolute Test Error", pad = 20)
plt.xlabel('Number of Epochs')
plt.ylabel('Average Energy Error (MeV)')
```

```
[22]: Text(0, 0.5, 'Average Energy Error (MeV)')
```



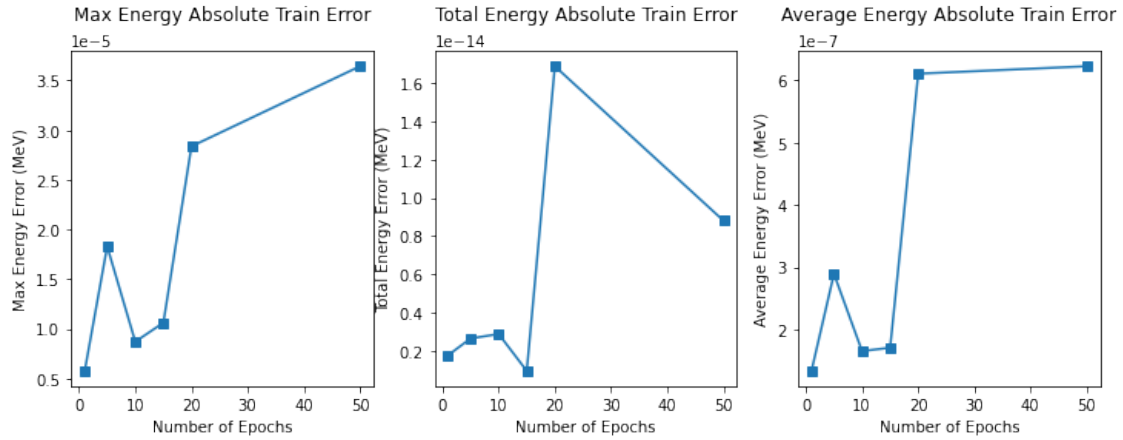
```
[23]: fig = plt.figure(figsize = (12, 4))

plt.subplot(1, 3, 1)
plt.plot(epochList, trainMaxMSE, marker='s')
plt.title("Max Energy Absolute Train Error", pad = 20)
plt.xlabel('Number of Epochs')
plt.ylabel('Max Energy Error (MeV)')

plt.subplot(1, 3, 2)
plt.plot(epochList, trainTotalMSE, marker='s')
plt.title("Total Energy Absolute Train Error", pad = 20)
plt.xlabel('Number of Epochs')
plt.ylabel('Total Energy Error (MeV)')

plt.subplot(1, 3, 3)
plt.plot(epochList, trainAvgMSE, marker='s')
plt.title("Average Energy Absolute Train Error", pad = 20)
plt.xlabel('Number of Epochs')
plt.ylabel('Average Energy Error (MeV)')
```

```
[23]: Text(0, 0.5, 'Average Energy Error (MeV)')
```



```
[24]: # Results with 100,000 points

# Number of epochs: 1
# Time spent: 41.4709038734436

# Number of epochs: 5
# Time spent: 209.08989548683167

# Number of epochs: 10
# Time spent: 423.1534082889557

# Number of epochs: 15
# Time spent: 646.6692581176758

# Number of epochs: 20
# Time spent: 835.7174115180969

# Number of epochs: 50
# Time spent: 2107.0108013153076

# Number of epochs: 1
# Max energy percent error: 19.58636320715849
# Total energy percent error: 24.325337635849067
# Average energy percent error: 14.268807343509357

# Number of epochs: 5
# Max energy percent error: 24.806485173653556
# Total energy percent error: 43.16065515019244
# Average energy percent error: 22.830055824436172

# Number of epochs: 10
```

```

# Max energy percent error: 22.419187074140353
# Total energy percent error: 37.010358828319994
# Average energy percent error: 19.137852256849456

# Number of epochs: 15
# Max energy percent error: 22.667619660241414
# Total energy percent error: 37.72516050555141
# Average energy percent error: 18.710265948355165

# Number of epochs: 20
# Max energy percent error: 34.52741609944199
# Total energy percent error: 44.01372313803574
# Average energy percent error: 33.48004556367719

# Number of epochs: 50
# Max energy percent error: 29.11596143268651
# Total energy percent error: 41.24085503272979
# Average energy percent error: 26.759934569978807

```

[25]:

```

# Results with 20,000 points

# Number of epochs: 1
# Time spent: 9.709996938705444

# Number of epochs: 5
# Time spent: 42.58600425720215

# Number of epochs: 10
# Time spent: 86.28900504112244

# Number of epochs: 15
# Time spent: 129.9060001373291

# Number of epochs: 20
# Time spent: 172.23799514770508

# Number of epochs: 50
# Time spent: 436.66264843940735

# Number of epochs: 1
# Max energy percent error: 14.266001682042852
# Total energy percent error: 36.2113883322816
# Average energy percent error: 14.382154573345156

# Number of epochs: 5
# Max energy percent error: 13.186282608741399
# Total energy percent error: 20.86685418910202

```


Average energy percent error: 11.821664805706583

Number of epochs: 10

Max energy percent error: 17.19713317728656

Total energy percent error: 23.92806554969021

Average energy percent error: 12.881195411127187

Number of epochs: 15

Max energy percent error: 19.317774507765645

Total energy percent error: 28.18222565512904

Average energy percent error: 16.43670669838012

Number of epochs: 20

Max energy percent error: 25.952888453939533

Total energy percent error: 39.46280229124166

Average energy percent error: 25.0593774302352

Number of epochs: 50

Max energy percent error: 24.551931096353997

Total energy percent error: 34.28238226862895

Average energy percent error: 20.571137202898512