

# MNIST-CGAN

January 29, 2022

## 1 Simple CGAN - MNIST Data set

In this notebook we will use the simple GAN code mostly but with a slight difference, we will try to make it a Conditional GAN. On this circumstances, we will use MNIST dataset and like other instances of GAN we will use Torch framework for neural network implementation.

Please have in mind since most of the code are like the previous MNIST simple GAN we discussed, I won't disclose previously explained matters and only discuss what changes we must have implement in order to make this GAN, a conditional one.

### 1.1 Importing and utility functions

```
[ ]: import torch
from torch import nn
from tqdm.auto import tqdm
from torchvision import transforms
from torchvision.datasets import MNIST # Training dataset
from torchvision.utils import make_grid
from torch.utils.data import DataLoader
import matplotlib.pyplot as plt
import numpy as np

def show_tensor_images(image_tensor, num_images=25, size=(1, 28, 28)):
    """
    Function for visualizing images: Given a tensor of images, number of
    images, and size per image, plots and prints the images in a uniform grid.
    """
    image_unflat = image_tensor.detach().cpu().view(-1, *size)
    image_grid = make_grid(image_unflat[:num_images], nrow=5)
    plt.imshow(image_grid.permute(1, 2, 0).squeeze())
    plt.show()
```

### 1.2 Creating Generator

We have to modify code so the generator can perform conditional generation.

```
[ ]: class Generator(nn.Module):
    """
        This is our Generator Class.
        Inputs ->
            noise_dim = dimension of noise vector.
            image_dim = dimension of images fitted for the dataset use,
                mnist use 28 * 28 grayscale images, thus 28 * 28 * 1 = 784
            hidden_dim = default value of inner dimension
    """

    def __init__(self, noise_dim=10, image_dim=784, hidden_dim=128, n_classes=10, image_size=28):
        super(Generator, self).__init__()
        self.image_size = image_size
        self.block1 = nn.Sequential(
            nn.Linear(noise_dim + n_classes, hidden_dim),
            nn.BatchNorm1d(hidden_dim),
            nn.ReLU(inplace=True)
        )
        self.block2 = nn.Sequential(
            nn.Linear(hidden_dim, hidden_dim * 2),
            nn.BatchNorm1d(hidden_dim * 2),
            nn.ReLU(inplace=True)
        )
        self.block3 = nn.Sequential(
            nn.Linear(hidden_dim * 2, hidden_dim * 4),
            nn.BatchNorm1d(hidden_dim * 4),
            nn.ReLU(inplace=True)
        )
        self.block4 = nn.Sequential(
            nn.Linear(hidden_dim * 4, hidden_dim * 8),
            nn.BatchNorm1d(hidden_dim * 8),
            nn.ReLU(inplace=True)
        )
        self.block5 = nn.Sequential(
            nn.Linear(hidden_dim * 8, image_dim),
            nn.Tanh()
        )
        self.embed = nn.Embedding(n_classes, 10)           # embedding has to be
        #add to the noise for generator

    def forward(self, noise, labels):
        """
            Function for froward pass in our network.
            takes noise as input and returns the image.
            Input ->
                noise = a noise tensor with dimension of (number_samples, noise_dim)
        """

```

```

    ...
    noise = noise.view(noise.size(0), 64)
    embedding = self.embed(labels) # this step is neccesary to make the embedding the right shape.
    x = torch.cat([noise, embedding], dim=1)
    out = self.block1(x)
    out = self.block2(out)
    out = self.block3(out)
    out = self.block4(out)
    out = self.block5(out)

    return out.view(x.size(0), 28, 28)

```

### 1.3 Creating Noise

```
[ ]: def get_noise(number_samples, noise_dim, device):
    ...
    Function for creating noise vector with given dimension (number_samples, noise_dim),
    Inputs ->
    number_samples = number of samples to generate
    noise_dim = dimension of the noise vector
    ...
    return torch.randn(number_samples, noise_dim, device=device)
```

## 2 Creating Discriminator

First, we must implement a way to pass label to discriminator too, like we do for generator. Have in mind there are multiple different ways to implement this feature. We do this with creating a nn.Embedding instance.

```
[ ]: class Discriminator(nn.Module):
    ...
    The Discriminator Class
    Inputs ->
    image_dim = dimension of images fitted for the dataset use,
    mnist use 28 * 28 grayscale images, thus 28 * 28 * 1 = 784
    hidden_dim = default value of inner dimension
    n_classes = number of classes our dataset has
    image_size = resolution of our square image in data set. for MNIST it is 28
    ...
    def __init__(self, image_dim=784, hidden_dim=128, n_classes=10, image_size=28): # we must add n_classes and image_size here too
        super(Discriminator, self).__init__()
        self.block1 = nn.Sequential(
```

```

        nn.Linear(image_dim + n_classes, hidden_dim * 4),
        # + n_classes required for passing number of classes too
        nn.LeakyReLU(negative_slope=.2)
    )
    self.block2 = nn.Sequential(
        nn.Linear(hidden_dim * 4, hidden_dim * 2),
        nn.LeakyReLU(negative_slope=.2)
    )
    self.block3 = nn.Sequential(
        nn.Linear(hidden_dim * 2, hidden_dim),
        nn.LeakyReLU(negative_slope=.2)
    )
    self.block4 = nn.Sequential(
        nn.Linear(hidden_dim, 1),
        nn.Sigmoid()
    )
    self.embed = nn.Embedding(n_classes, 10)           # creating embedding
instance

def forward(self, image, labels):                      # we must pass
labels
    """
    This function is for forward pass of the discriminator.
    Given an image tensor, it returns a 1-dimension tensor representing
    whether an image is original or generated.
    Inputs ->
        image = Flattened image tensor with dimension of (image_dim)
        labels = class of each image
    """
    image = image.view(image.size(0), 784)
    embedding = self.embed(labels)
    x = torch.cat([image, embedding], dim=1)
    out = self.block1(x)
    out = self.block2(out)
    out = self.block3(out)
    out = self.block4(out)
    return out

```

## 2.1 Training Phase

Before we start the training phase, we need to address some hyperparameters which is listed below:

- criterion: the loss function we want to use.
- n\_epochs: the number of times we want to iterate through the entire dataset in training phase, epochs
- noise\_dim: dimension of the noise vector
- display\_step: in what frequency model show the generated images from trained generator
- batch\_size: number of images for each batch (per forward/backward pass)

- lr: the learning rate
- device: the device type which we want to perform training on

also in this step we will load the MNIST dataset as tensors using a data loader.

```
[ ]: criterion = nn.BCELoss()
n_epochs = 500
noise_dim = 64
display_step = 500
batch_size = 128
lr = .00001
device = 'cuda'

dataloader = DataLoader(
    MNIST('./data', download=True, transform=transforms.ToTensor()),
    batch_size=batch_size, shuffle=True)
```

Now, we can initialize! we need to initialize generator, discriminator and optimizers. Since each optimizer only takes the parameters of one particular model, we need 2 optimizers; one for generator and one for discriminator.

```
[ ]: gen = Generator(noise_dim).to(device)
disc = Discriminator().to(device)
gen_opt = torch.optim.Adam(gen.parameters(), lr=lr)
disc_opt = torch.optim.Adam(disc.parameters(), lr=lr)
```

Before we train the GAN, we might need to calculate the discriminator's and generator's loss. this is the way how we, discriminator and generator will know how well they are performing and improve themselves.

**IMPORTANT:** generator is needed when want to calculate discriminator's loss, so we have to use `.detach()` on the generator result so we its parameters won't get updated in discriminator's backward pass.

```
[ ]: def disc_loss(gen, disc, criterion, original, num_images, noise_dim, device, ↵labels):
    """
        Return the loss of discriminator
        Inputs ->
            gen = generator model, this returns an image given noise
            disc = discriminator model, this returns prediction
            criterion = loss function, this is used for comparing ↵
            discriminator's
            prediction to the ground truth; generated = 0 and original = 1
            original = a batch of original images
            num_images = number of images generated should produce. also the ↵
            length
            of original images.
            noise_dim = dimension of noise vector
```

```

    device = the device type
>Returns ->
    disc_loss = loss value for current batch, torch scaler type
'''

noise_vec = get_noise(num_images, noise_dim, device)
fake_labels = torch.tensor(np.random.randint(0, 10, num_images), □
↪device=device, dtype=torch.long)
gen_image = gen(noise_vec, fake_labels).detach()
gen_labels = torch.zeros(num_images, 1, device=device)
gen_pred = disc(gen_image, fake_labels)
gen_img_loss = criterion(gen_pred, gen_labels)
org_labels = torch.ones(num_images, 1, device=device)
org_pred = disc(original, labels)
org_img_loss = criterion(org_pred, org_labels)
disc_loss = (org_img_loss + gen_img_loss) / 2
return disc_loss

```

```

[ ]: def gen_loss(gen, disc, criterion, num_images, noise_dim, device):
    '''
        Return the loss of generator
    Inputs ->
        gen = generator model, this returns an image given noise
        disc = discriminator model, this returns prediction
        criterion = loss function, this is used for comparing
↪discriminator's
        prediction to the ground truth; generated = 0 and original = 1
        num_images = number of images generated should produce. also the
↪length
        of original images.
        noise_dim = dimension of noise vector
        device = the device type
    Returns ->
        gen_loss = loss value for current batch, torch scaler type
    '''

    noise_vec = get_noise(num_images, noise_dim, device)
    fake_labels = torch.tensor(np.random.randint(0, 10, num_images), □
↪device=device, dtype=torch.long)
    gen_img = gen(noise_vec, fake_labels)
    gen_img_pred = disc(gen_img, fake_labels)
    gen_labels = torch.ones(num_images, 1, device=device)
    gen_loss = criterion(gen_img_pred, gen_labels)
    return gen_loss

```

## 2.2 Putting everything together

Training phase is almost identical to unsupervised version of GAN but with a slight and important change, which is now we need labels, both for generator and discriminator. also we have to get

labels for each image in MNIST dataset so we can pass it to discriminator.

```
[ ]: cur_step = 0
mean_generator_loss = 0
mean_discriminator_loss = 0
generator_loss = False
for epoch in range(n_epochs):

    # data loader return the batches
    for org, labels in tqdm(dataloader):
        cur_batch_size = len(org)
        # flattening batch of org images from dataset
        org = org.view(cur_batch_size, -1).to(device)
        labels = labels.to(device)

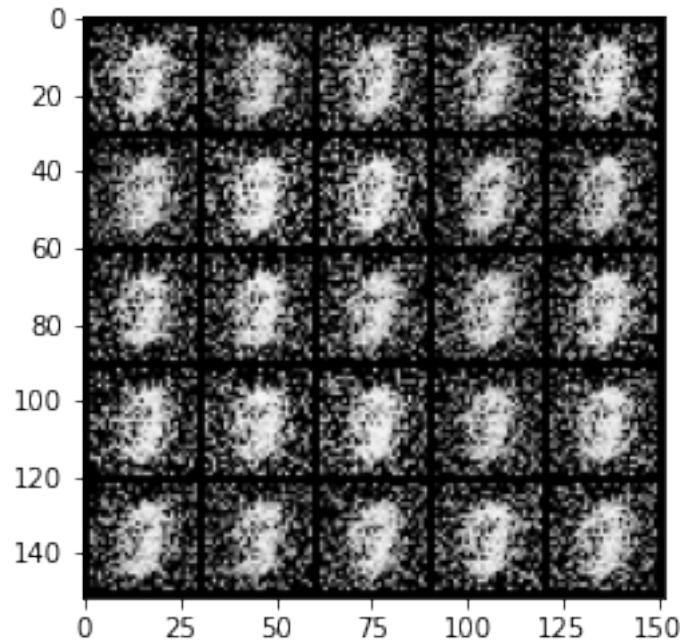
        ## updating discriminator ##
        # zeroing gradients before back prop
        disc_opt.zero_grad()
        discriminator_loss = disc_loss(gen, disc, criterion, org, cur_batch_size, noise_dim, device, labels)
        # update gradients
        discriminator_loss.backward(retain_graph=True)
        # update optimizer
        disc_opt.step()

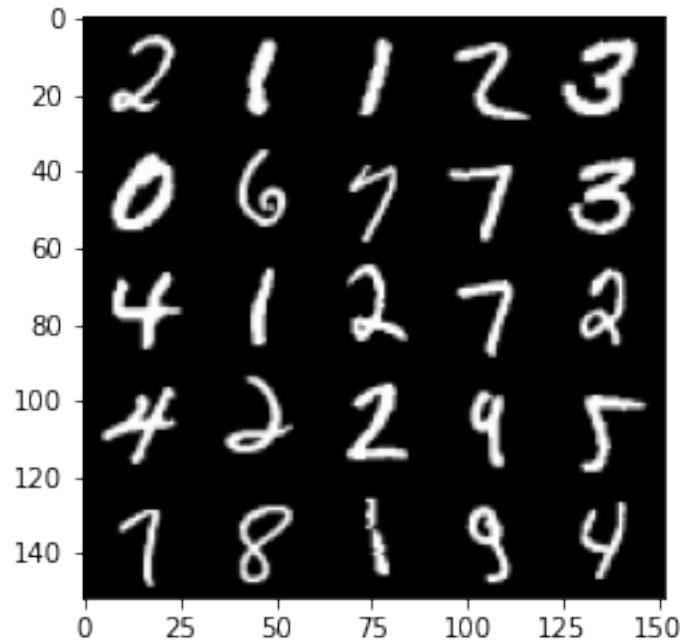
        ## updating generator ##
        gen_opt.zero_grad()
        generator_loss = gen_loss(gen, disc, criterion, cur_batch_size, noise_dim, device)
        generator_loss.backward(retain_graph=True)
        gen_opt.step()
        disc_opt.step()

    # calculating average discriminator and generator loss
    mean_discriminator_loss += discriminator_loss.item() / display_step
    mean_generator_loss += generator_loss.item() / display_step

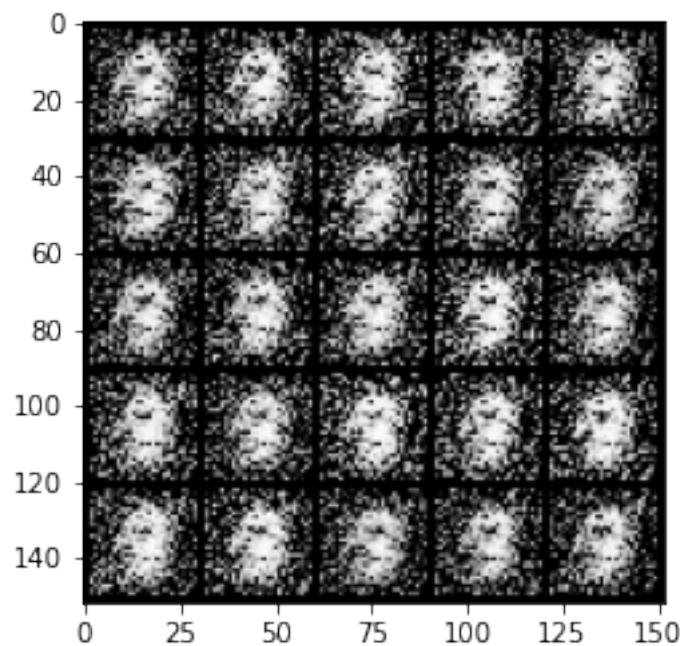
    # visualization
    if cur_step % display_step == 0 and cur_step > 0:
        print(f'Epoch {epoch}, step {cur_step} -> generator loss: {mean_generator_loss}, discriminator loss: {mean_discriminator_loss}')
        gen_noise = get_noise(cur_batch_size, noise_dim, device=device)
        generated = gen(gen_noise, labels)
        show_tensor_images(generated)
        show_tensor_images(org)
        mean_generator_loss = 0
        mean_discriminator_loss = 0
```

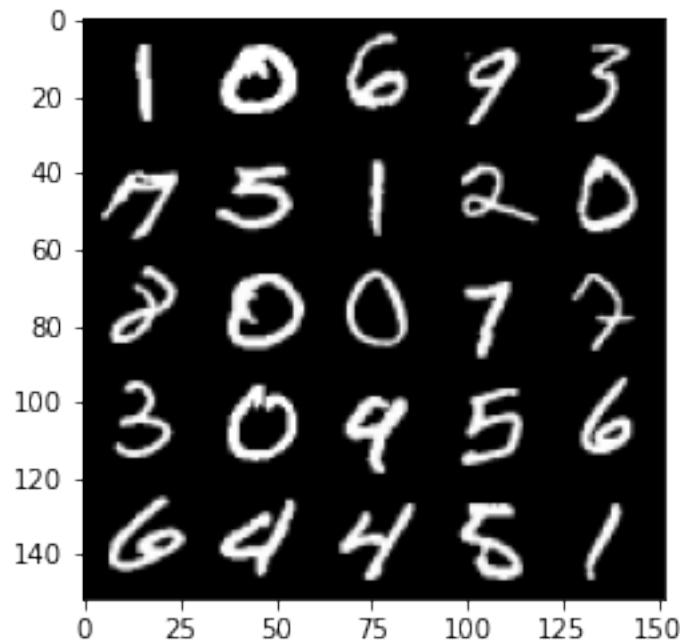
```
cur_step += 1  
100%| 469/469 [00:14<00:00, 32.59it/s]  
6%| 30/469 [00:00<00:14, 30.81it/s]Clipping input data to the valid  
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).  
Epoch 1, step 500 -> generator loss: 0.4724232832193373, discriminator loss:  
0.7409491183757784
```





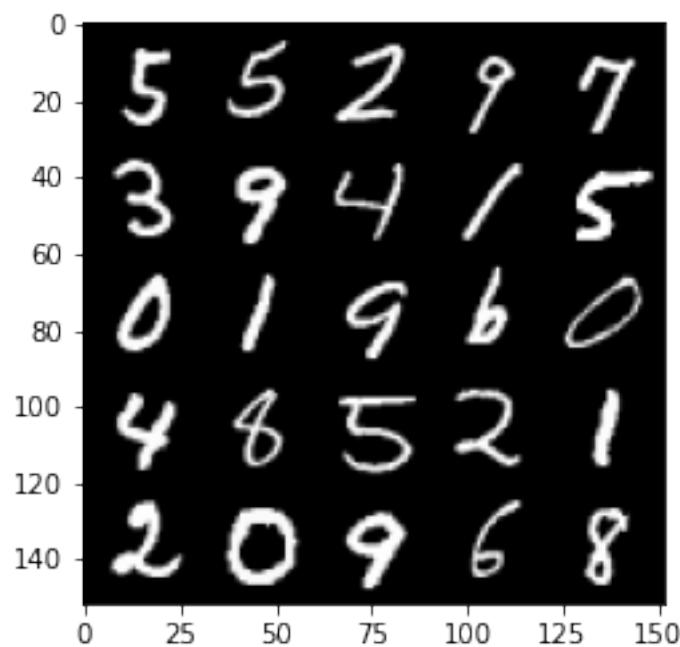
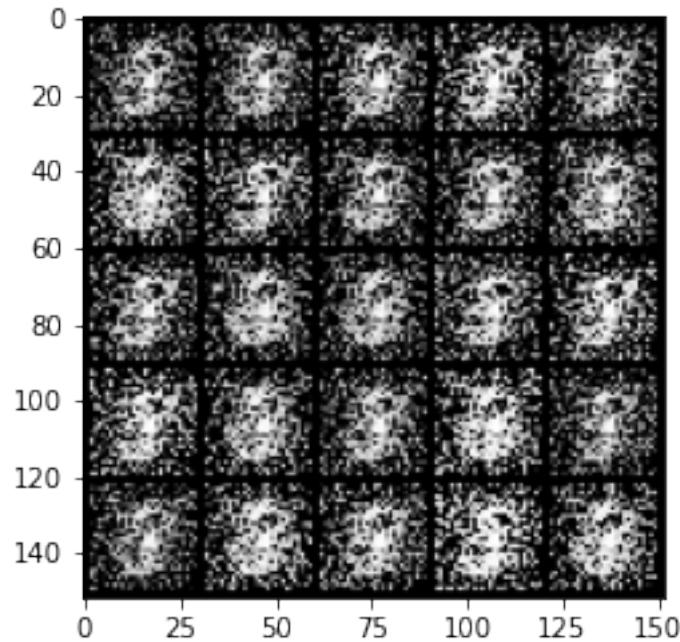
```
100%|      | 469/469 [00:14<00:00, 33.28it/s]
13%|      | 59/469 [00:01<00:11, 35.59it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 2, step 1000 -> generator loss: 0.4867181955575942, discriminator loss:
0.7263573709726333
```





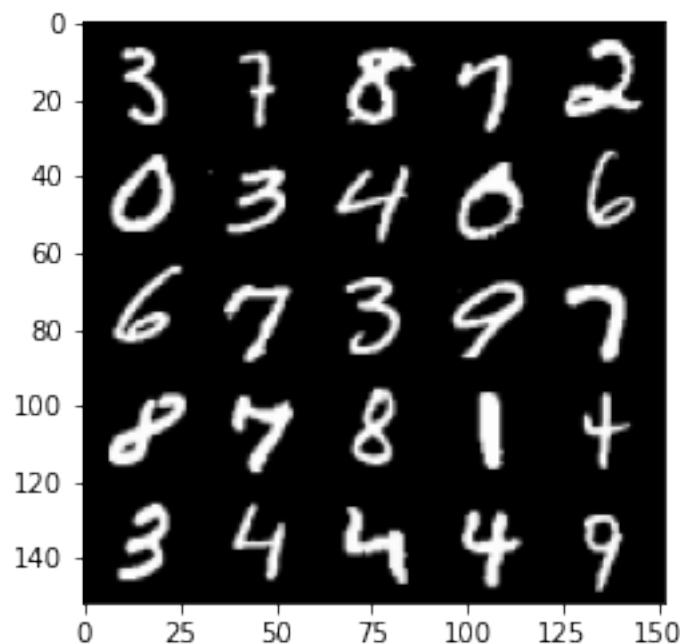
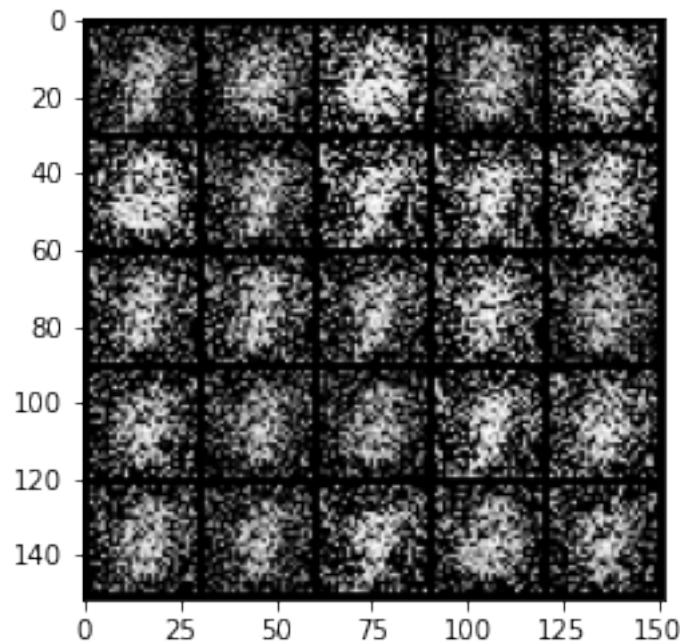
```
100%| 469/469 [00:14<00:00, 32.94it/s]
19%| 90/469 [00:02<00:11, 33.71it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

```
Epoch 3, step 1500 -> generator loss: 0.4947179808020593, discriminator loss:
0.6967002047300336
```



```
100%|      | 469/469 [00:13<00:00, 35.17it/s]
26%|      | 123/469 [00:03<00:09, 36.12it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

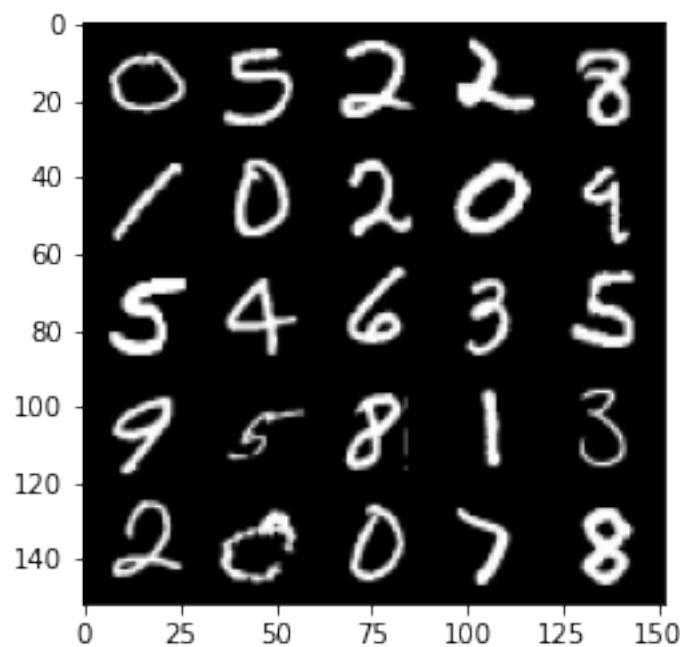
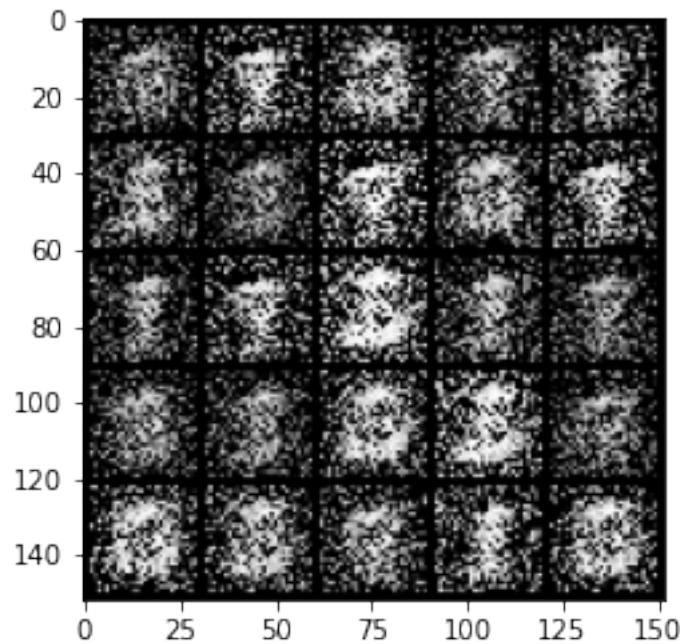
Epoch 4, step 2000 -> generator loss: 0.4756580003499986, discriminator loss:  
0.6918531703948975



100% | 469/469 [00:13<00:00, 35.37it/s]

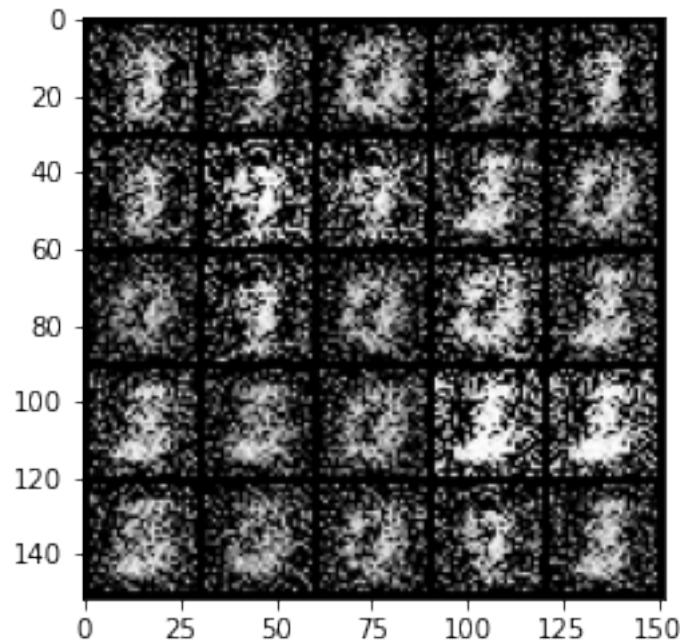
32% | 152/469 [00:04<00:08, 37.08it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

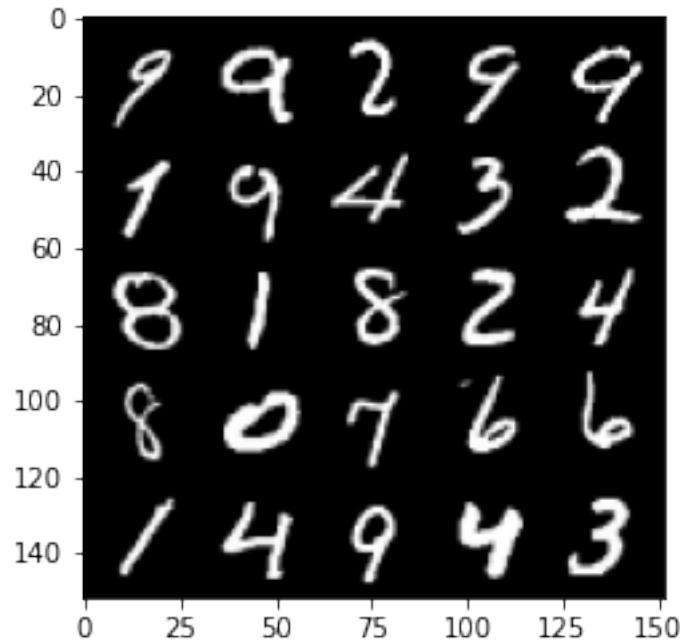
Epoch 5, step 2500 -> generator loss: 0.47472488820552844, discriminator loss: 0.6820050723552706



```
100%|      | 469/469 [00:13<00:00, 35.66it/s]
 40%|      | 186/469 [00:05<00:07, 36.97it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

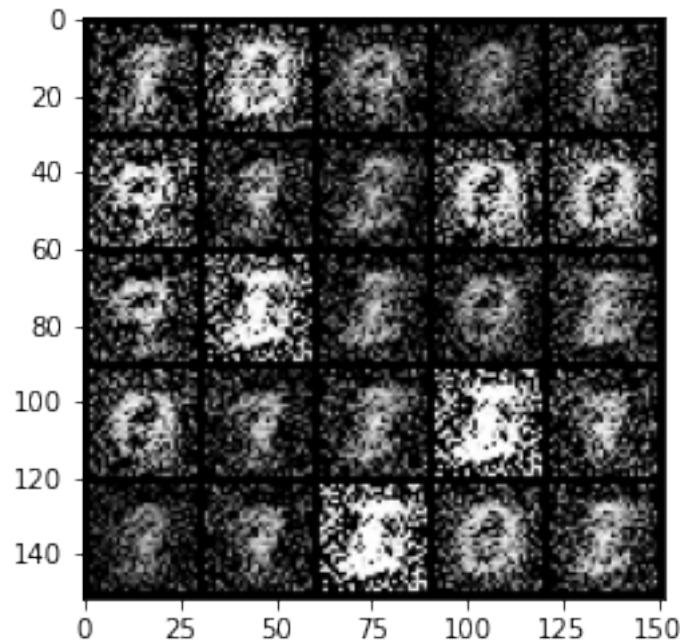
Epoch 6, step 3000 -> generator loss: 0.468240410983562, discriminator loss:  
0.6857138776779175

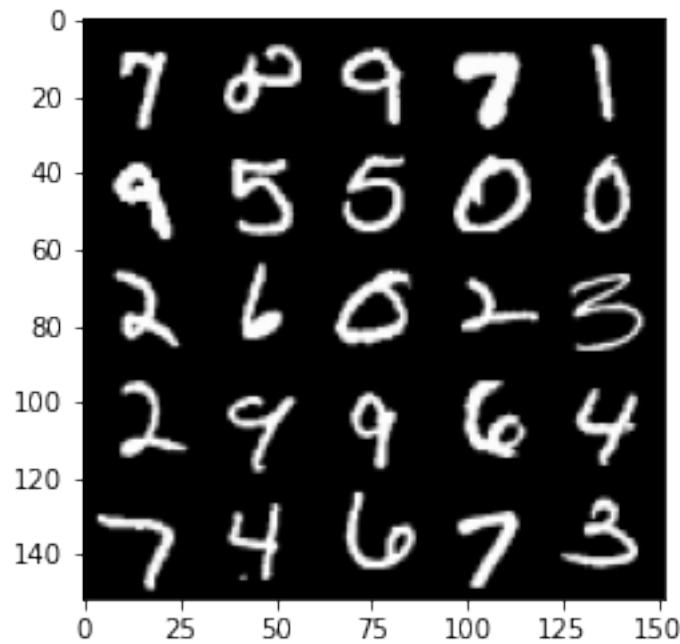




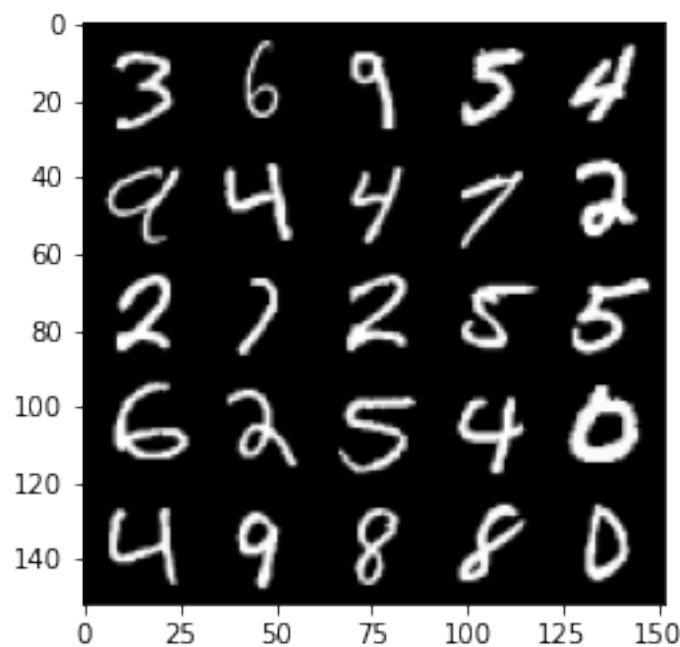
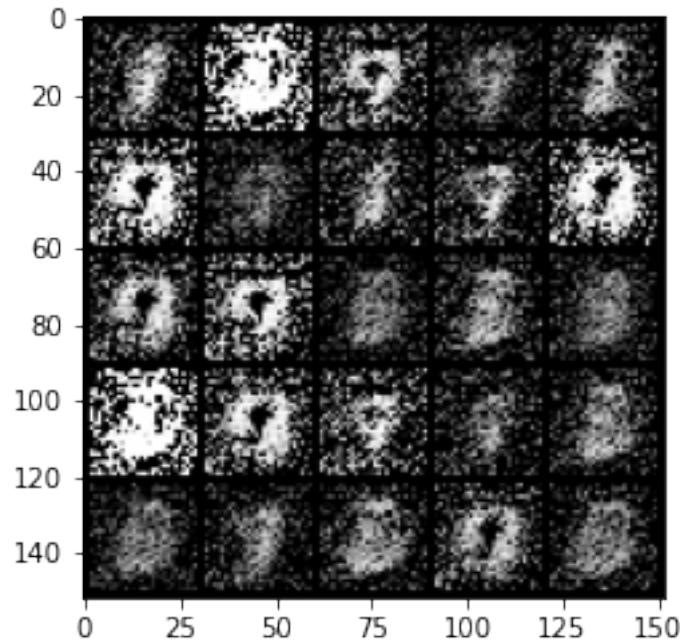
```
100%|      | 469/469 [00:13<00:00, 35.74it/s]
46%|      | 216/469 [00:05<00:06, 37.60it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 7, step 3500 -> generator loss: 0.47044857662916195, discriminator loss:
0.6870905922651291
```



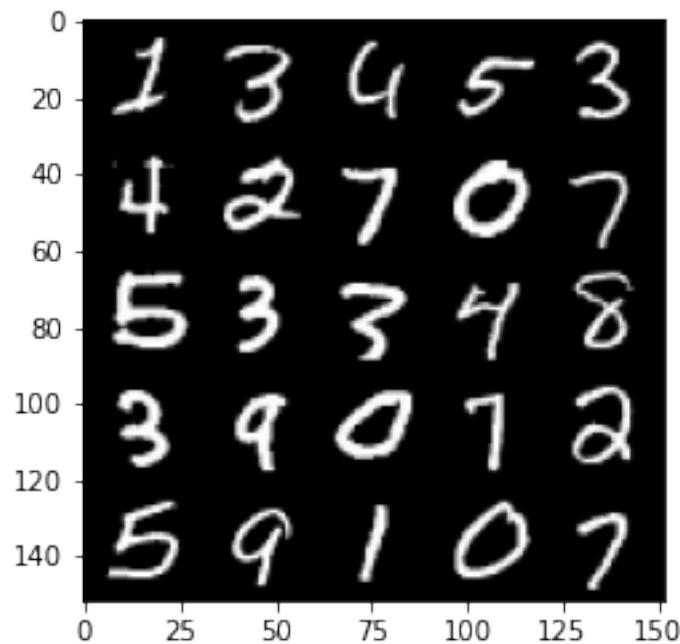
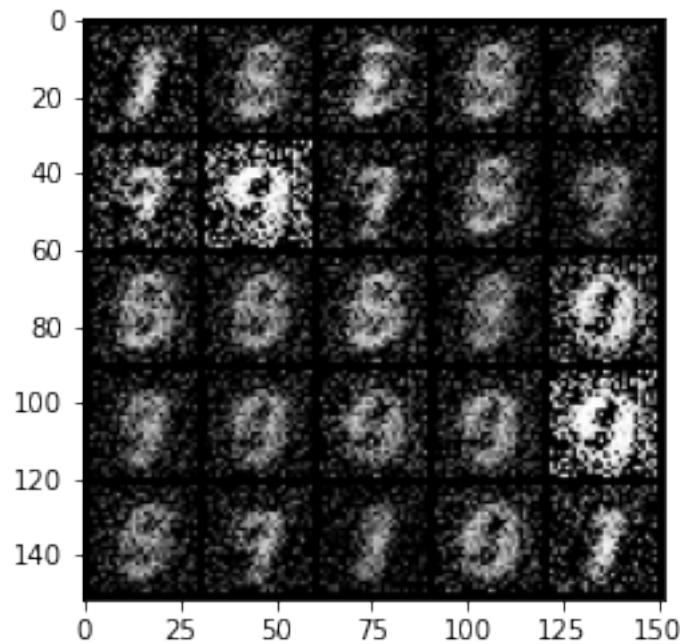


```
100%|    | 469/469 [00:13<00:00, 35.62it/s]
52%|    | 246/469 [00:06<00:06, 37.03it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
Epoch 8, step 4000 -> generator loss: 0.4521925150156022, discriminator loss:
0.7003002402782436
```



```
100%|      | 469/469 [00:13<00:00, 35.94it/s]
 59%|      | 279/469 [00:07<00:05, 37.47it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

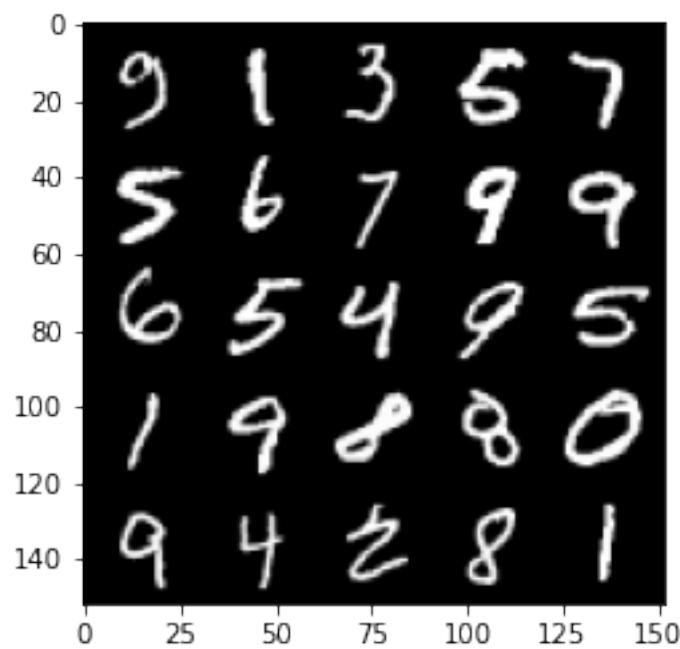
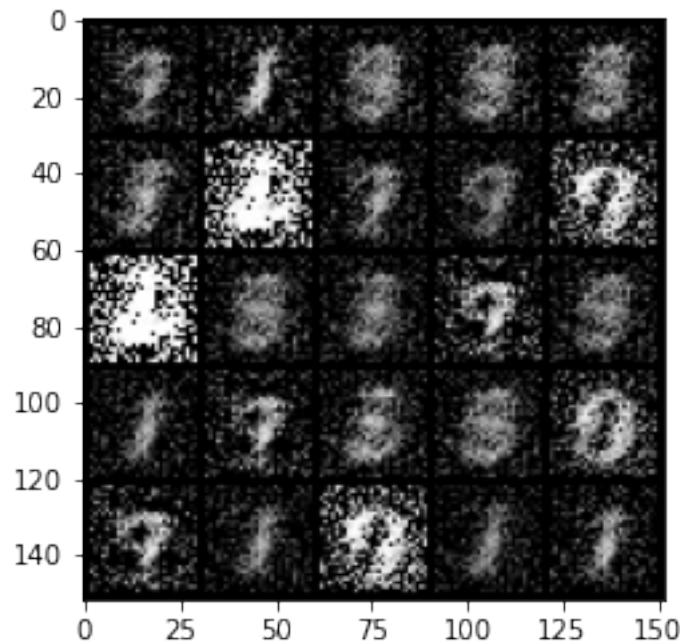
Epoch 9, step 4500 -> generator loss: 0.43940951353311547, discriminator loss:  
0.7142626283168799



100% | 469/469 [00:13<00:00, 35.79it/s]

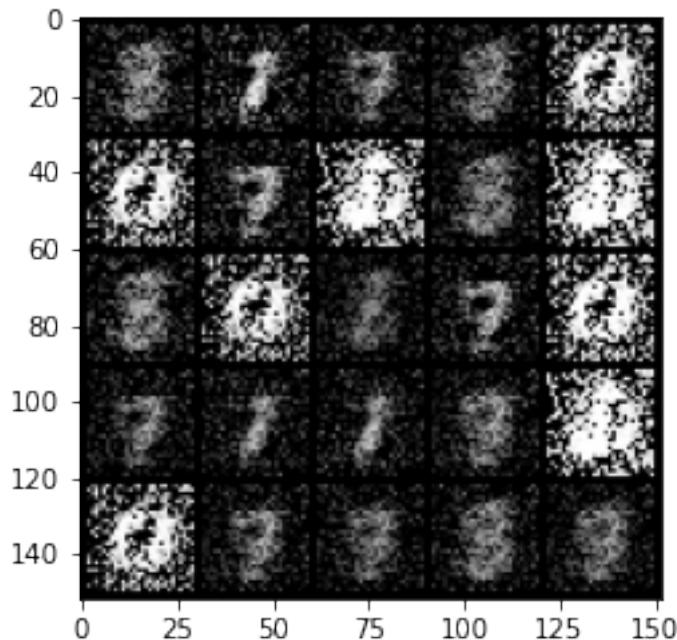
66%| 308/469 [00:08<00:04, 37.37it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

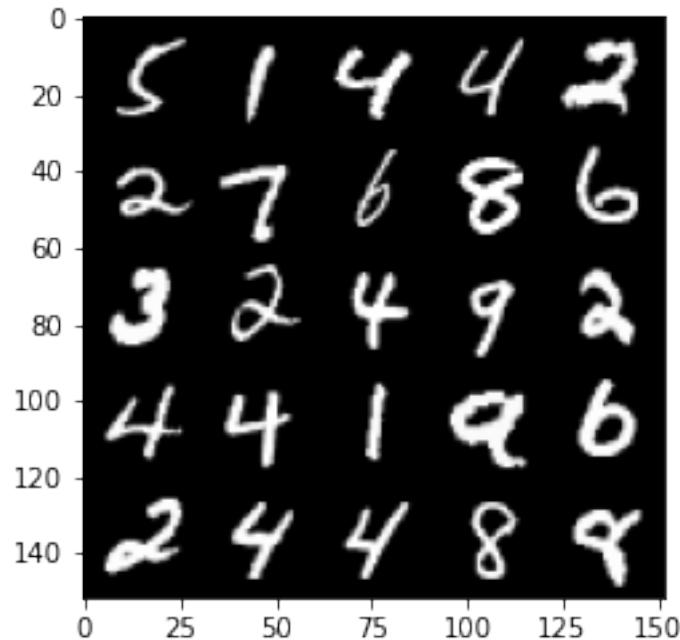
Epoch 10, step 5000 -> generator loss: 0.4365048027634623, discriminator loss: 0.7139829345941545



```
100%|      | 469/469 [00:13<00:00, 35.90it/s]
 72%|      | 340/469 [00:09<00:03, 36.55it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

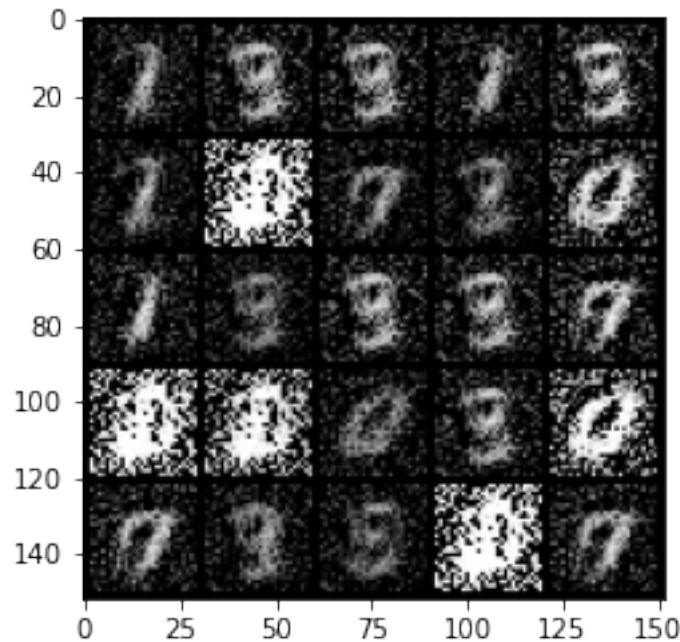
```
Epoch 11, step 5500 -> generator loss: 0.4318134631514553, discriminator loss:
0.7157194656133649
```

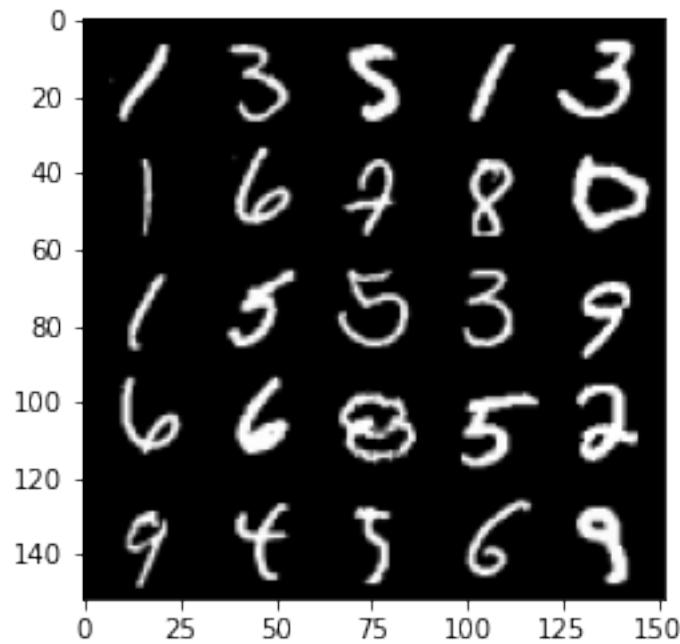




```
100%|      | 469/469 [00:13<00:00, 35.95it/s]
79%|      | 372/469 [00:10<00:02, 35.33it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

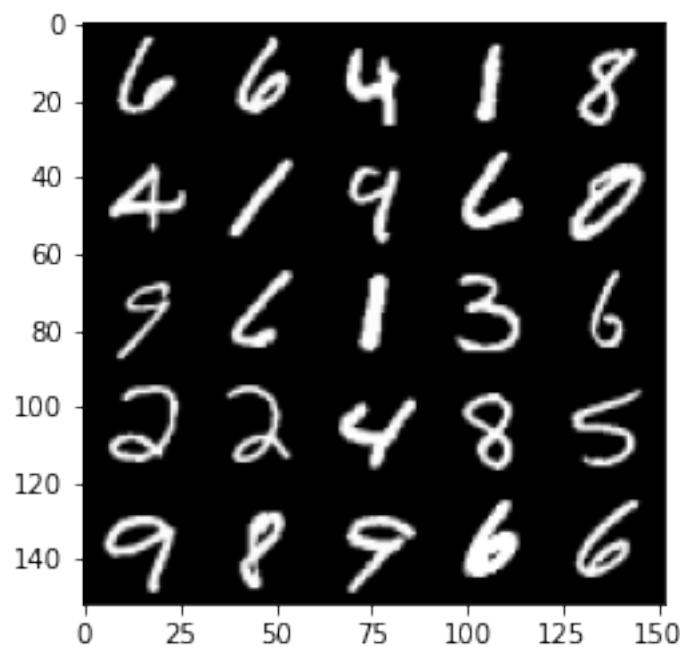
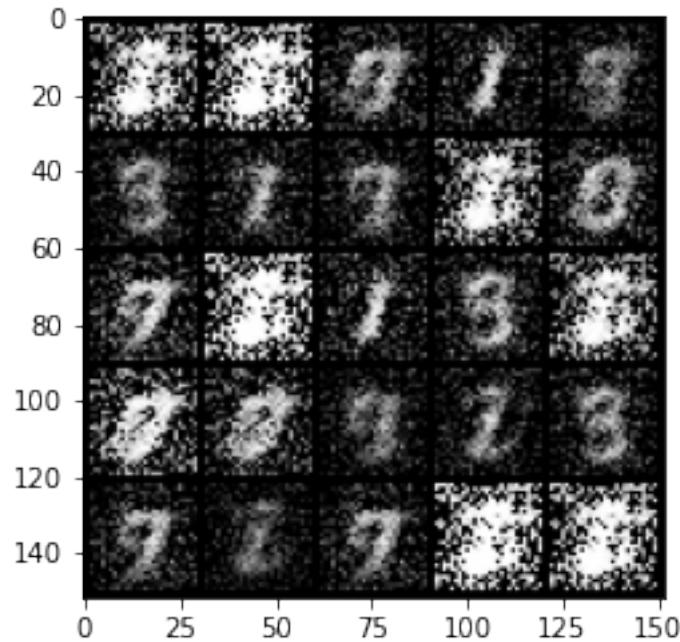
Epoch 12, step 6000 -> generator loss: 0.4217667046189309, discriminator loss:  
0.7232213504314426





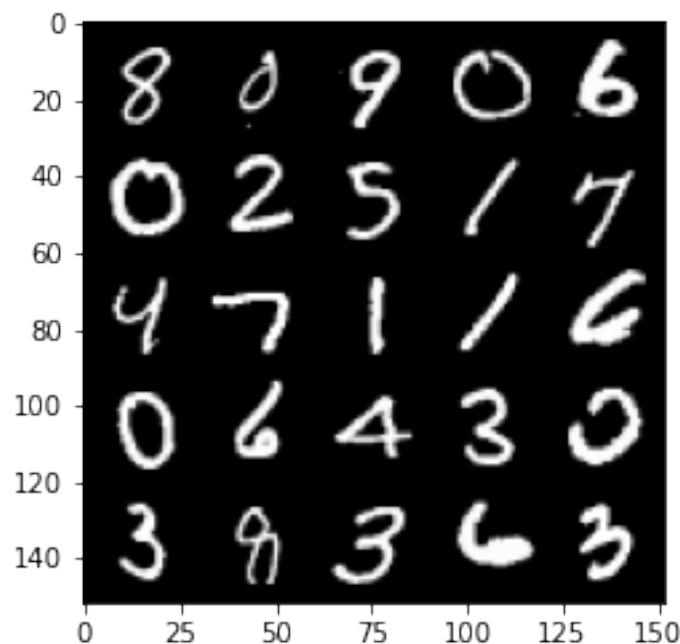
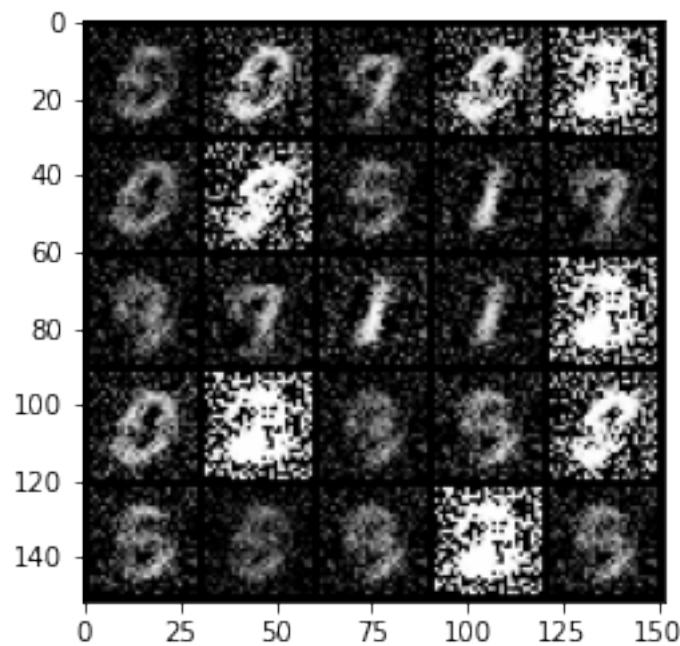
```
100%| 469/469 [00:13<00:00, 35.98it/s]
85%| 400/469 [00:10<00:01, 37.37it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 13, step 6500 -> generator loss: 0.4338139731884005, discriminator loss:
0.7161762530803676
```



```
100%|      | 469/469 [00:13<00:00, 36.01it/s]
93%|     | 434/469 [00:11<00:00, 37.52it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

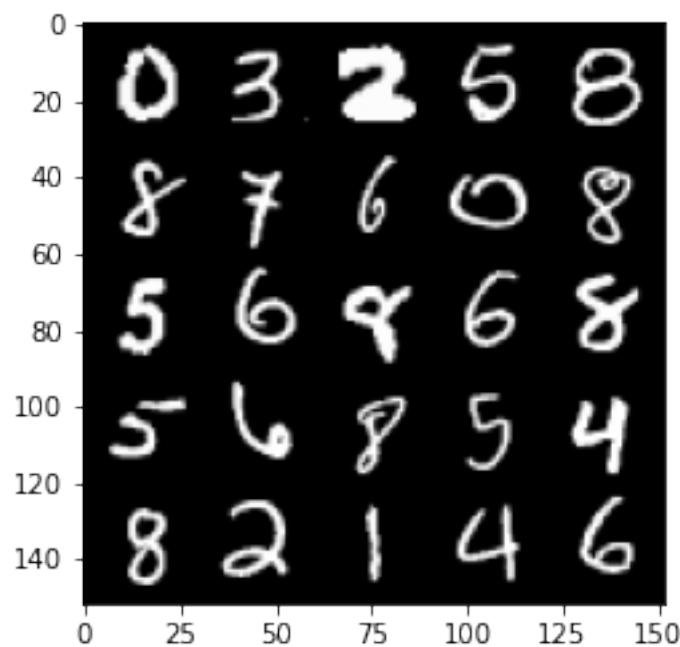
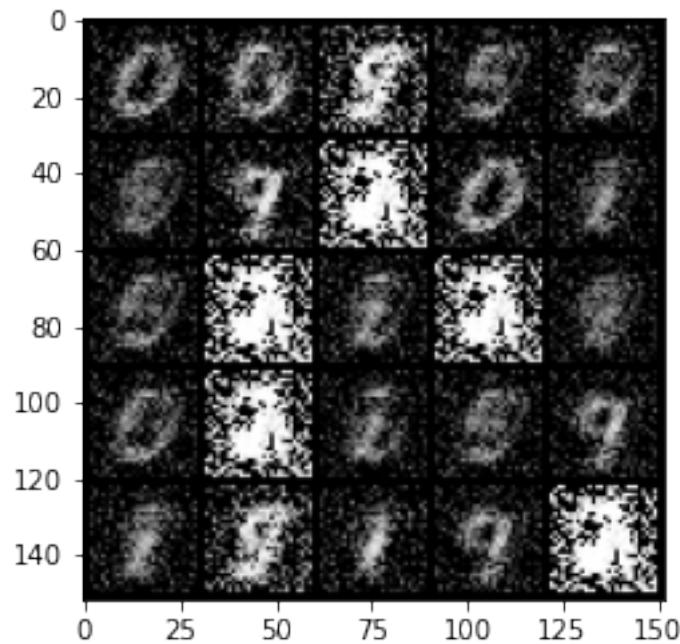
Epoch 14, step 7000 -> generator loss: 0.42873515456914923, discriminator loss: 0.7172650045156489



100% | 469/469 [00:12<00:00, 36.36it/s]

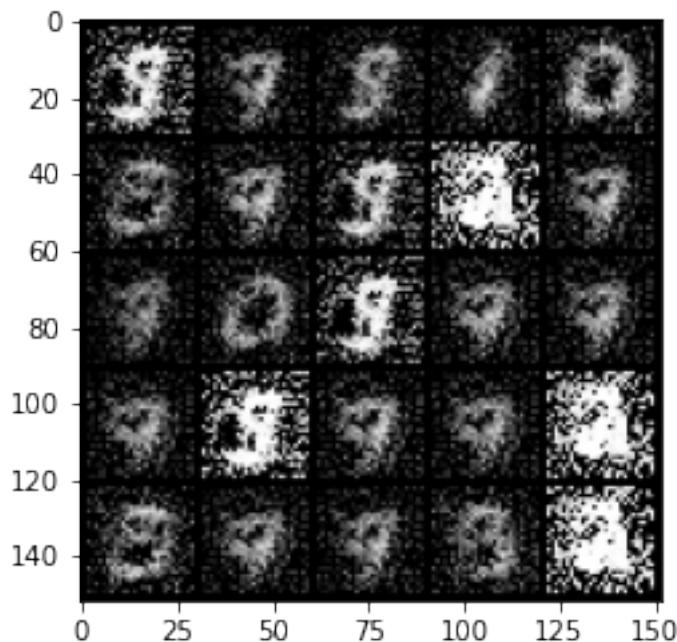
99%| 464/469 [00:12<00:00, 37.57it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

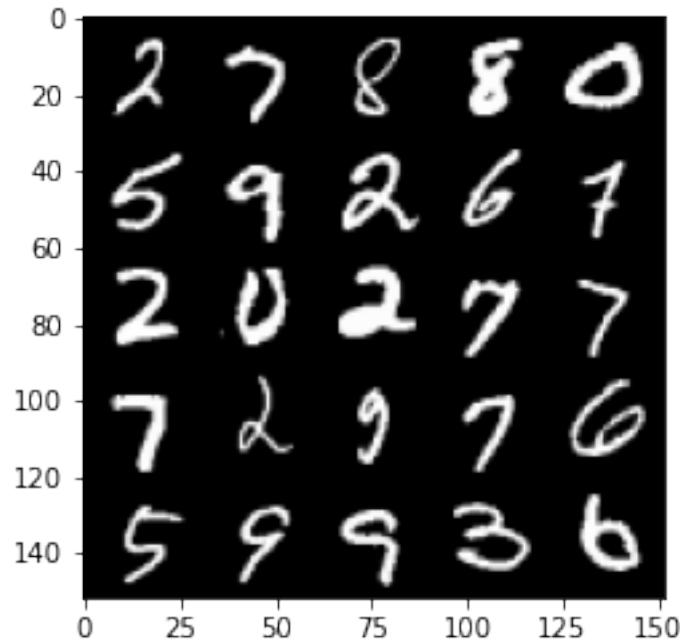
Epoch 15, step 7500 -> generator loss: 0.425231544435024, discriminator loss: 0.7201522402763371



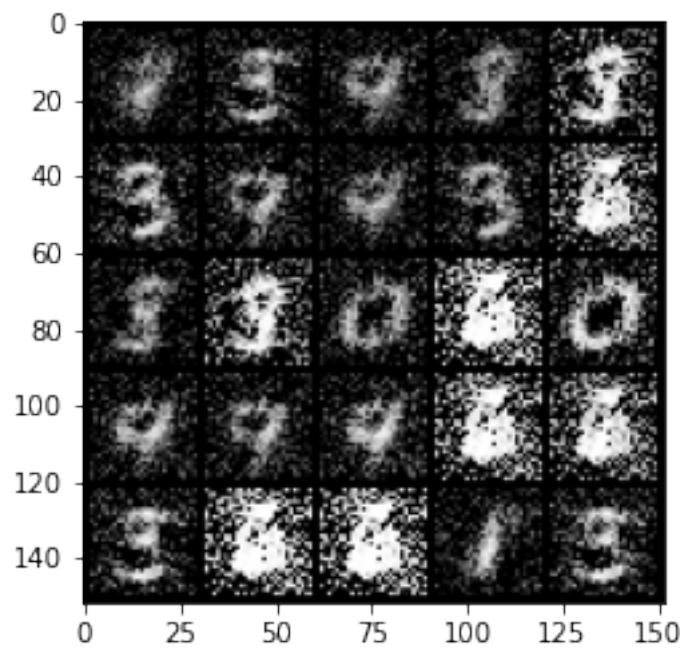
```
100%|    | 469/469 [00:12<00:00, 36.24it/s]
100%|    | 469/469 [00:12<00:00, 37.15it/s]
  5%|    | 24/469 [00:00<00:12, 37.00it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

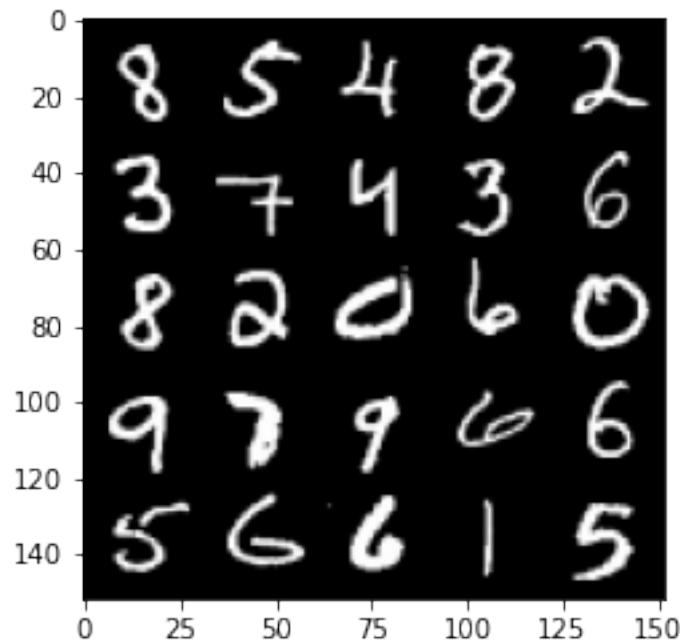
Epoch 17, step 8000 -> generator loss: 0.4257875501513483, discriminator loss:  
0.7203137456178658





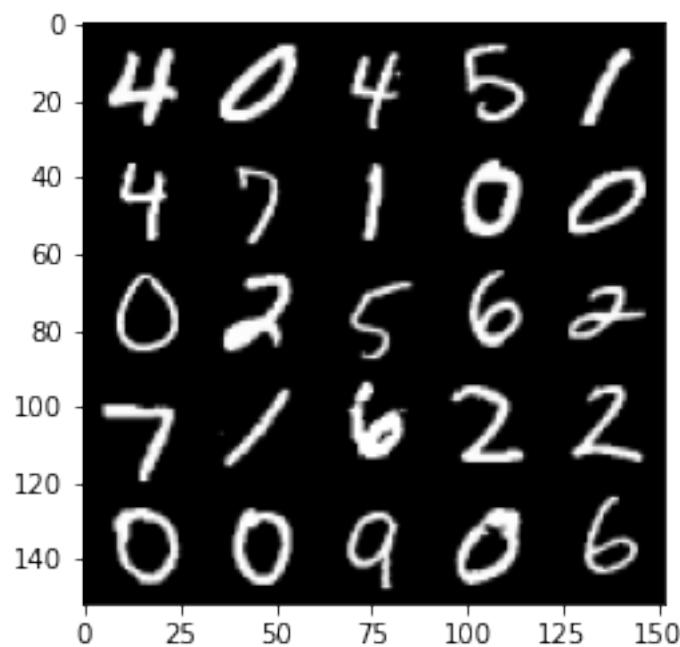
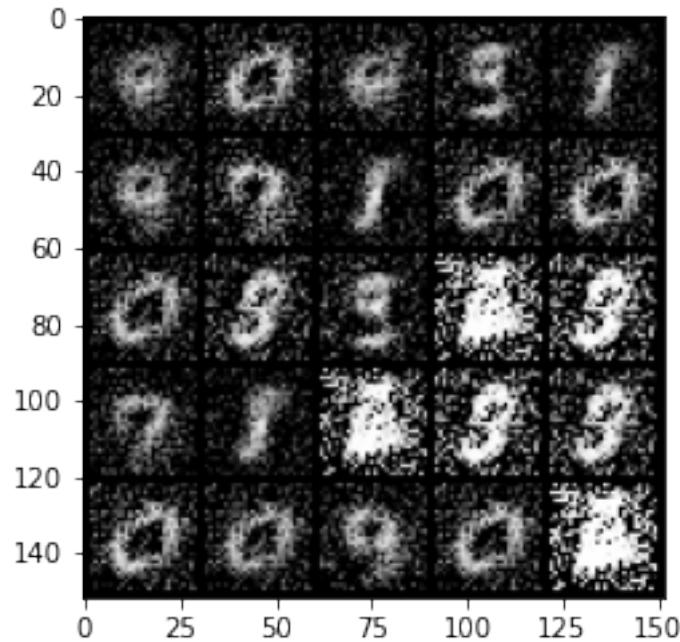
```
100% | 469/469 [00:14<00:00, 33.42it/s]
12% | 55/469 [00:01<00:12, 33.87it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 18, step 8500 -> generator loss: 0.42394720619916926, discriminator loss:
0.7258612009286891
```





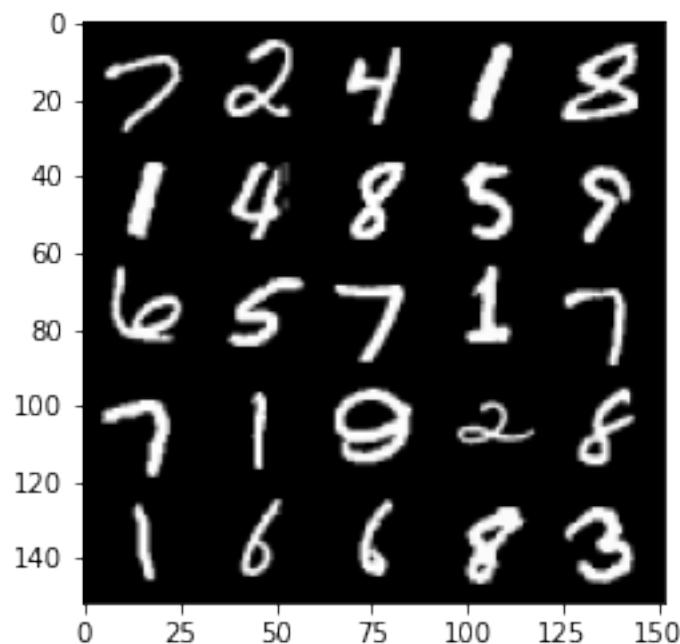
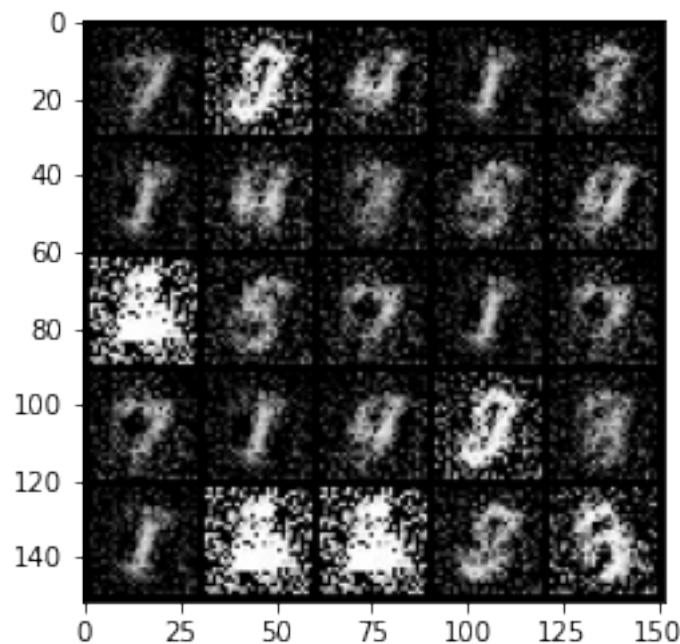
```
100% | 469/469 [00:13<00:00, 34.63it/s]
18% | 86/469 [00:02<00:11, 33.55it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

```
Epoch 19, step 9000 -> generator loss: 0.42874387091398225, discriminator loss:
0.722710057973862
```



```
100%| 469/469 [00:14<00:00, 31.80it/s]
26%| 120/469 [00:03<00:10, 33.55it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

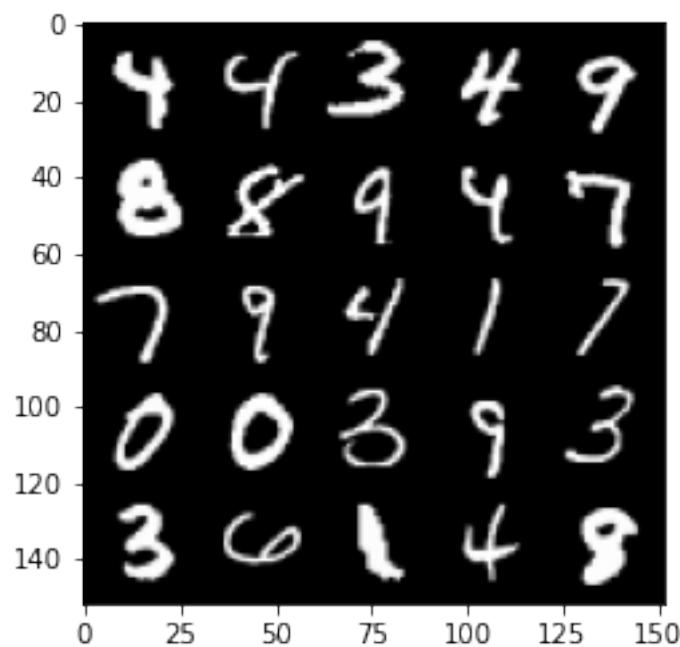
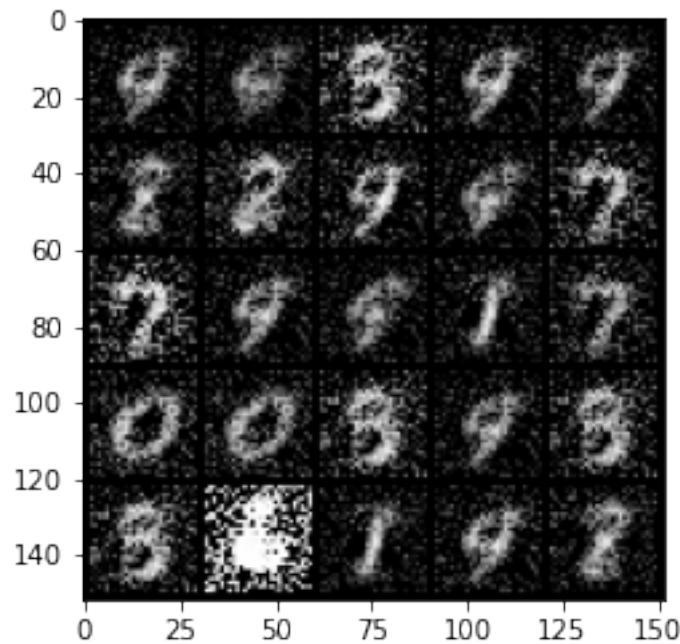
Epoch 20, step 9500 -> generator loss: 0.42836171591281896, discriminator loss: 0.726499688029289



100% | 469/469 [00:13<00:00, 34.08it/s]

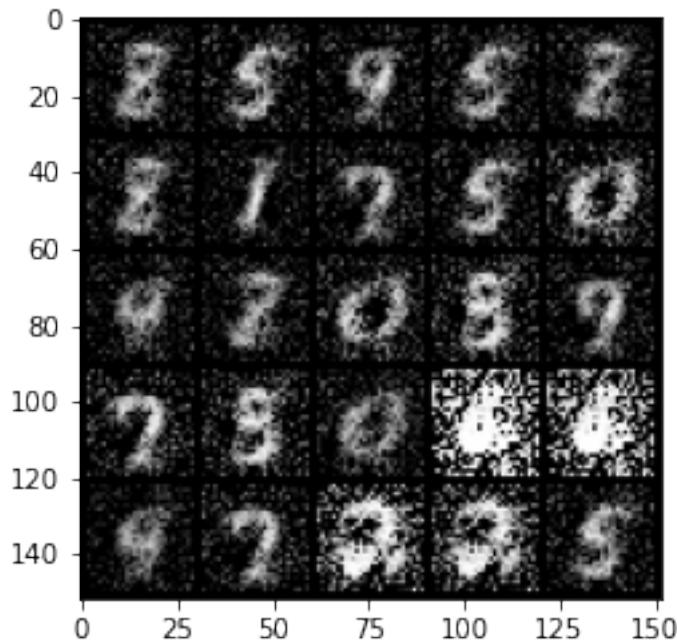
32% | 149/469 [00:05<00:13, 24.61it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

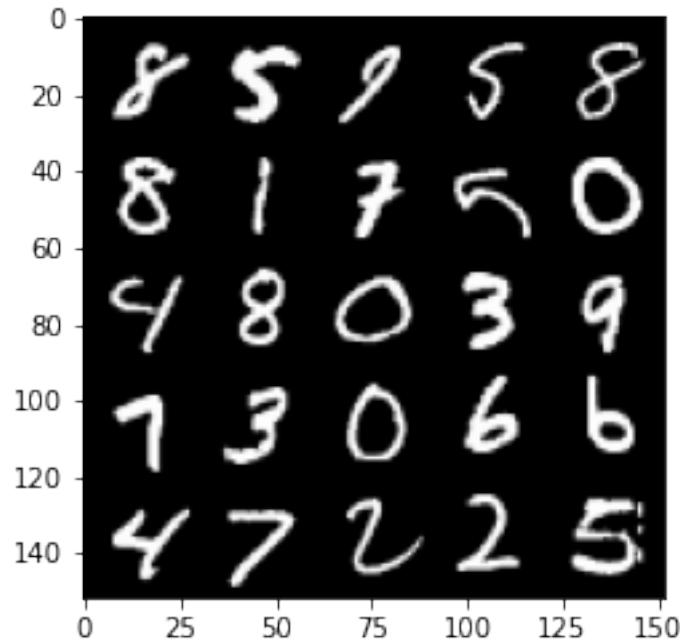
Epoch 21, step 10000 -> generator loss: 0.41833669757842973, discriminator loss: 0.7312739349603655



```
100%|      | 469/469 [00:21<00:00, 21.55it/s]
38%|      | 179/469 [00:05<00:08, 34.21it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

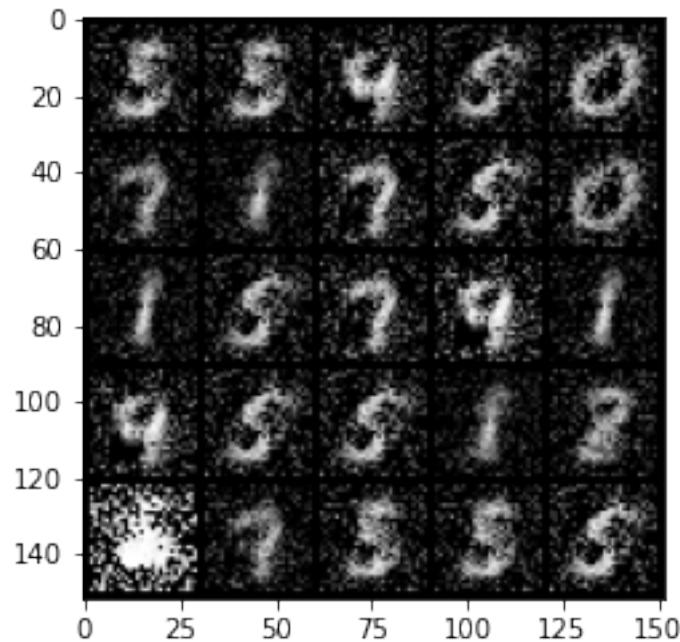
Epoch 22, step 10500 -> generator loss: 0.42351690059900265, discriminator loss:  
0.7286960762739183

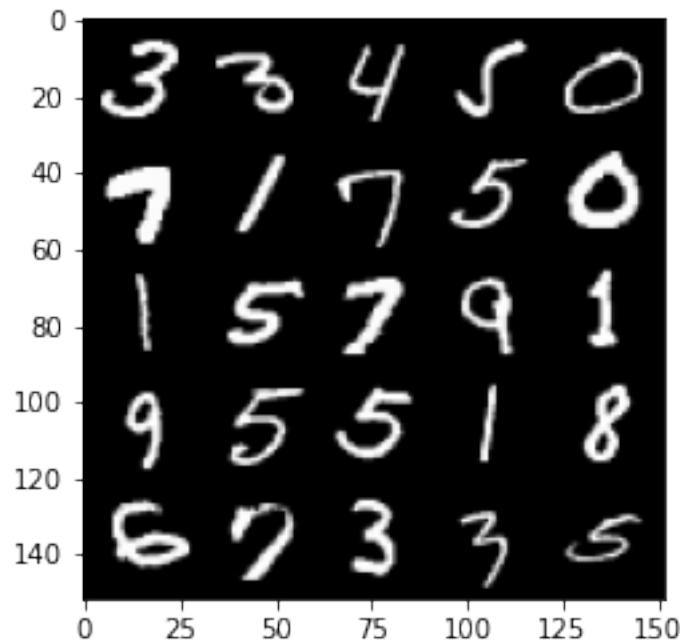




```
100% | 469/469 [00:14<00:00, 31.29it/s]
45% | 213/469 [00:06<00:07, 34.37it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

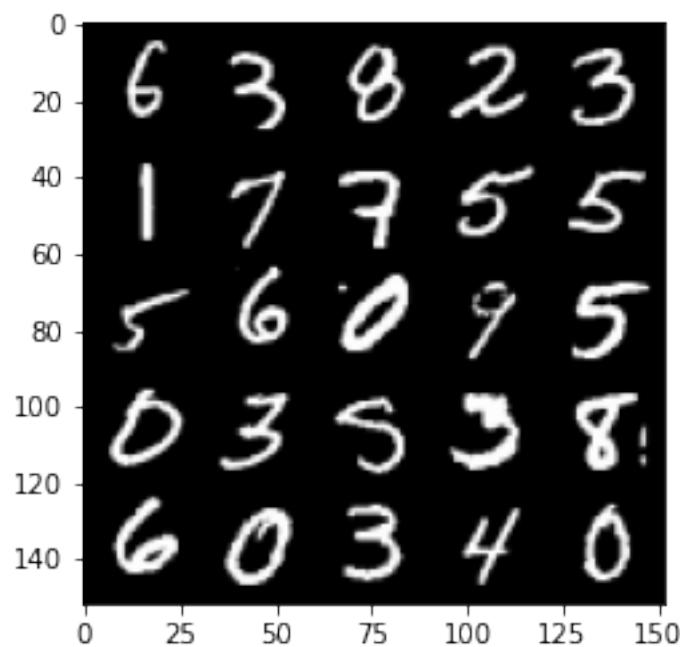
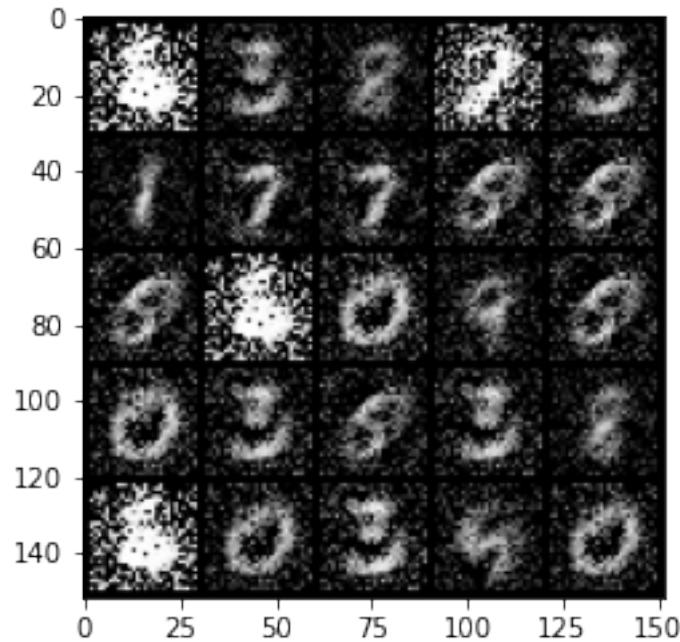
```
Epoch 23, step 11000 -> generator loss: 0.4237439445257188, discriminator loss:
0.729086944580079
```





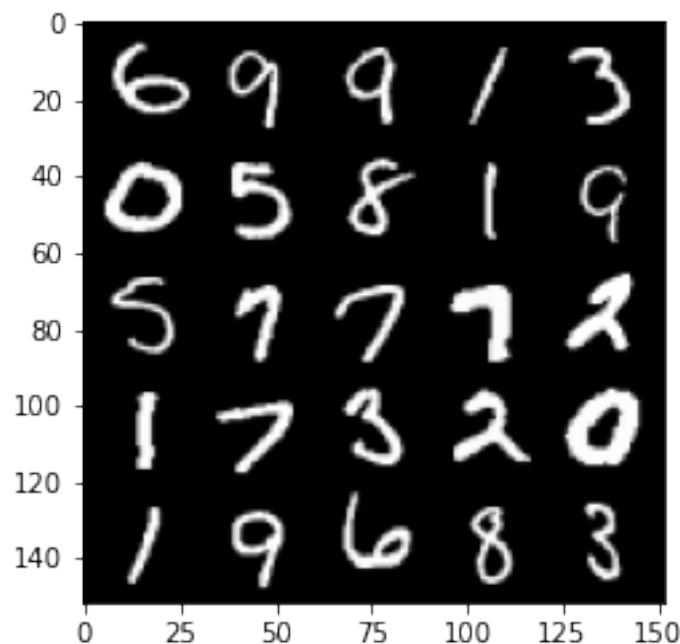
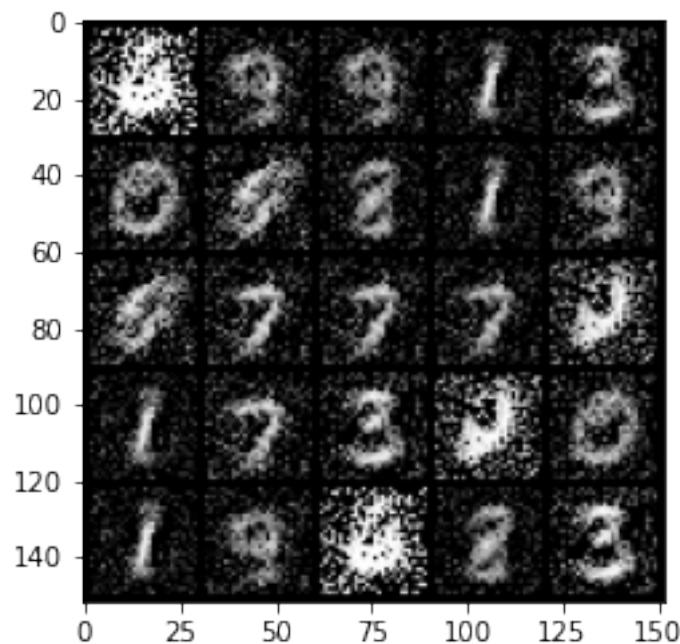
```
100% | 469/469 [00:14<00:00, 32.33it/s]
52% | 243/469 [00:07<00:06, 33.77it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 24, step 11500 -> generator loss: 0.425470985293389, discriminator loss: 0.7323155766725541



```
100%|      | 469/469 [00:14<00:00, 31.98it/s]
 59%|      | 275/469 [00:08<00:06, 31.04it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

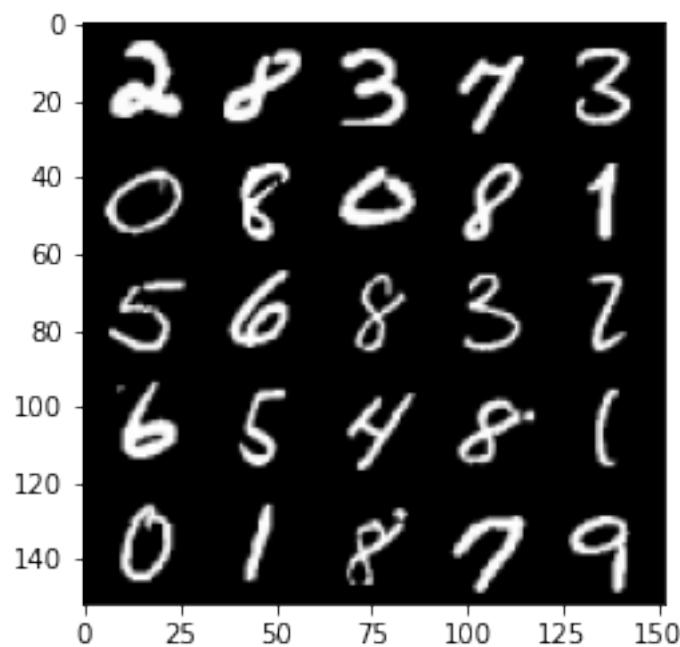
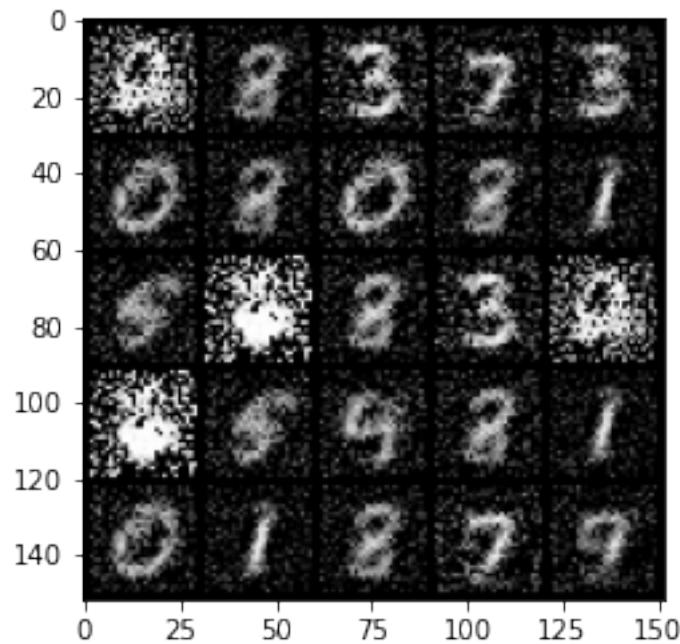
Epoch 25, step 12000 -> generator loss: 0.4218137900233266, discriminator loss: 0.7325903569459918



100% | 469/469 [00:15<00:00, 29.79it/s]

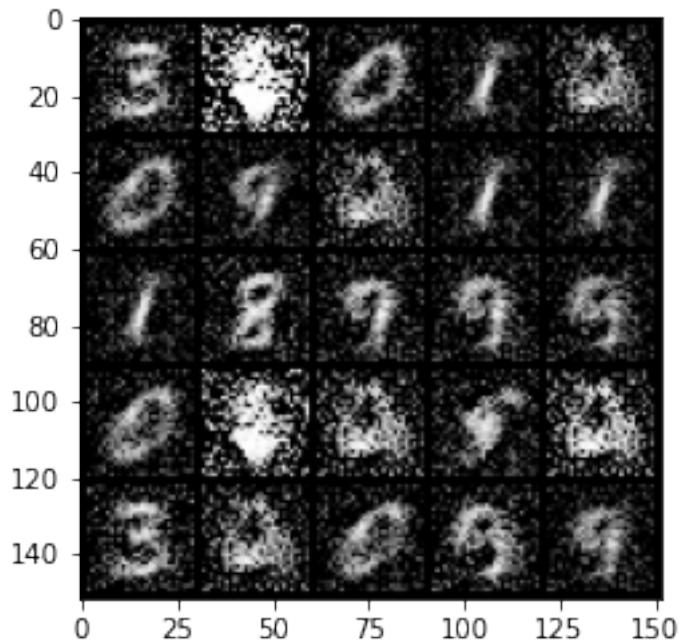
65%| 303/469 [00:09<00:05, 31.95it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

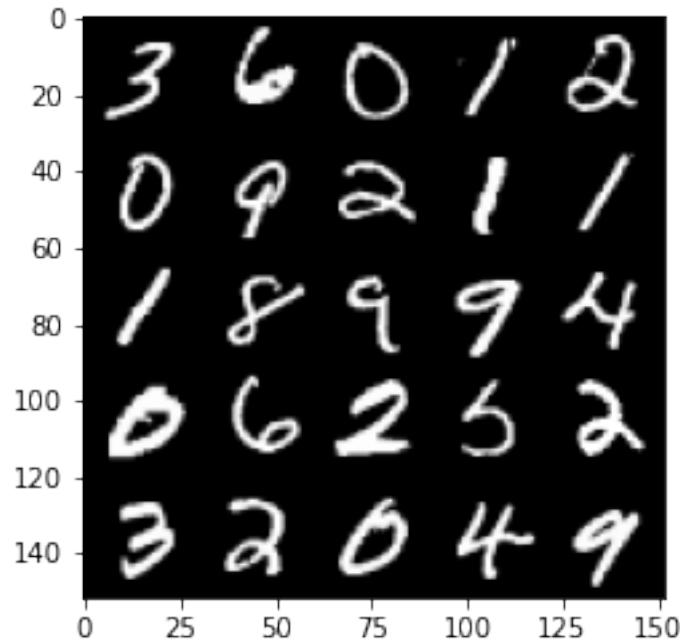
Epoch 26, step 12500 -> generator loss: 0.42629141920804964, discriminator loss: 0.7321135466098782



```
100%|      | 469/469 [00:15<00:00, 29.69it/s]
 72%|      | 336/469 [00:11<00:05, 26.10it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

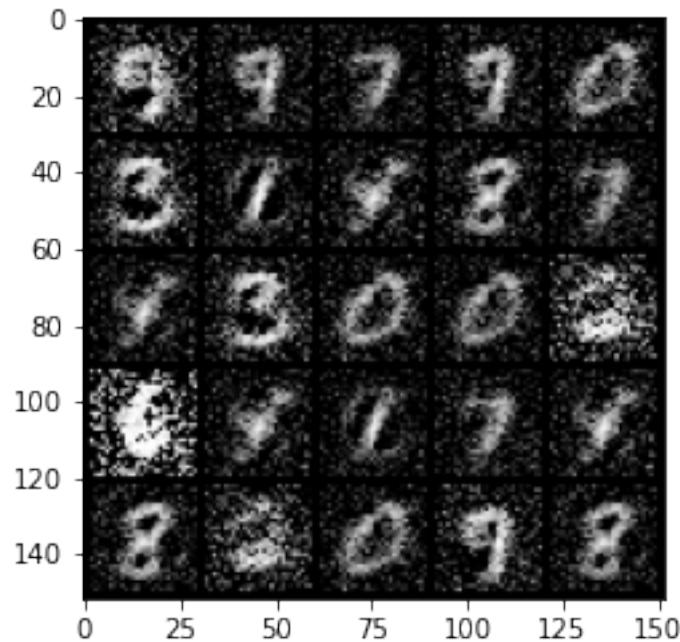
Epoch 27, step 13000 -> generator loss: 0.420831815063953, discriminator loss:  
0.7343173362016676

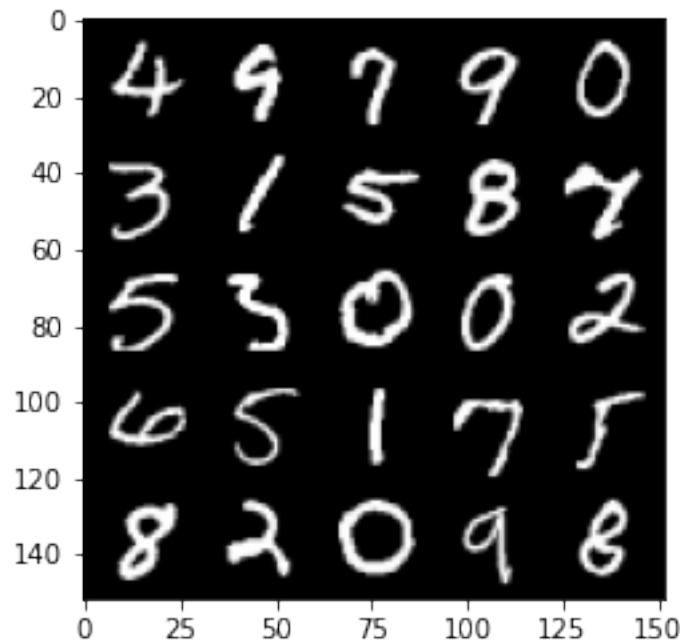




```
100%|      | 469/469 [00:19<00:00, 23.96it/s]
78%|      | 367/469 [00:13<00:03, 27.76it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

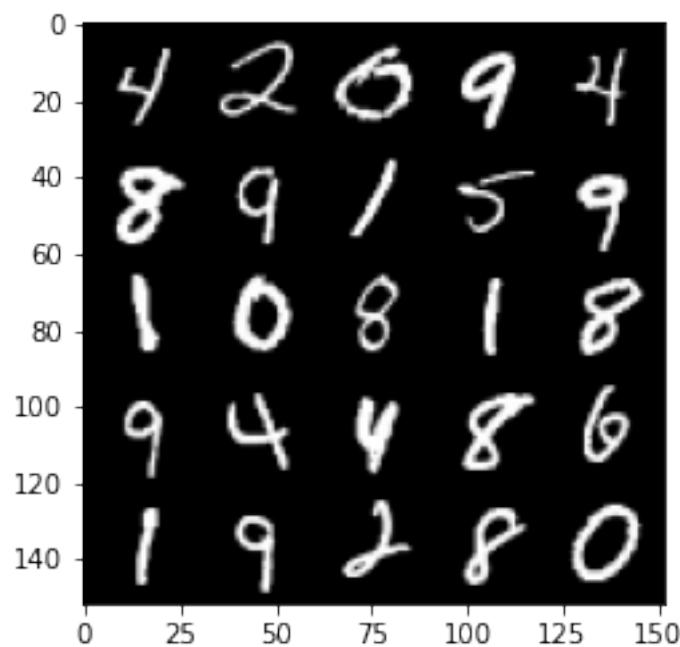
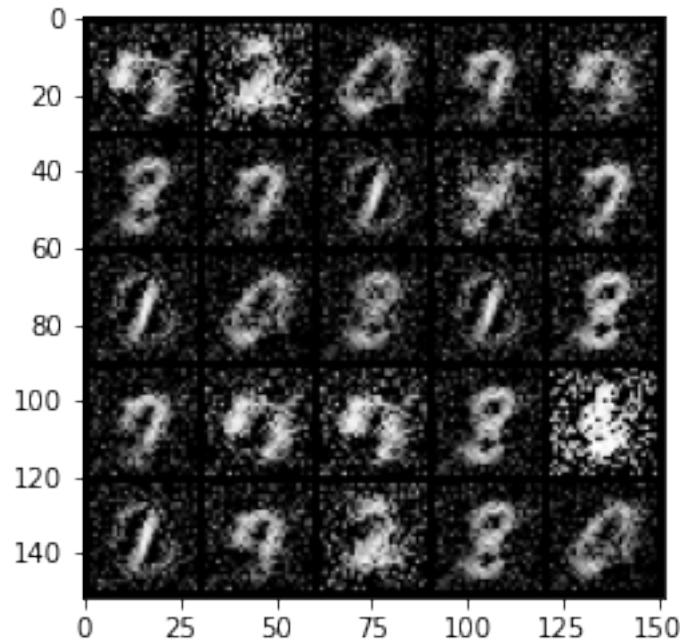
```
Epoch 28, step 13500 -> generator loss: 0.4266314589381217, discriminator loss:
0.7261039859056474
```





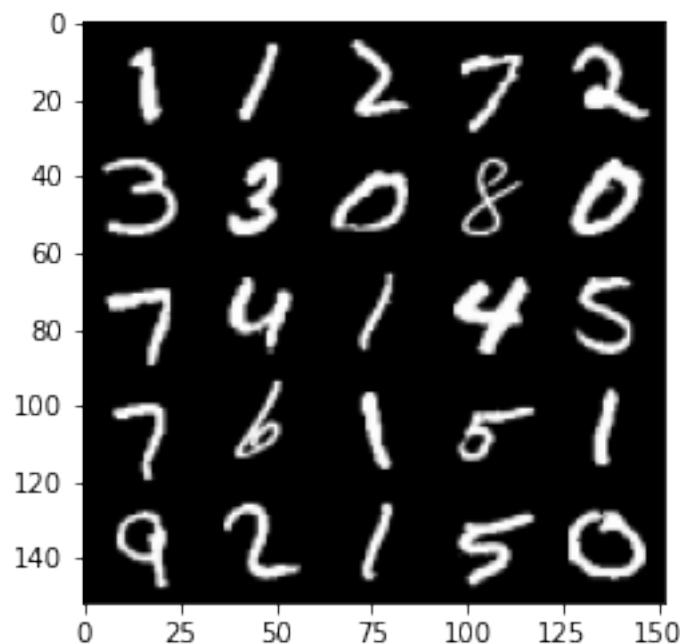
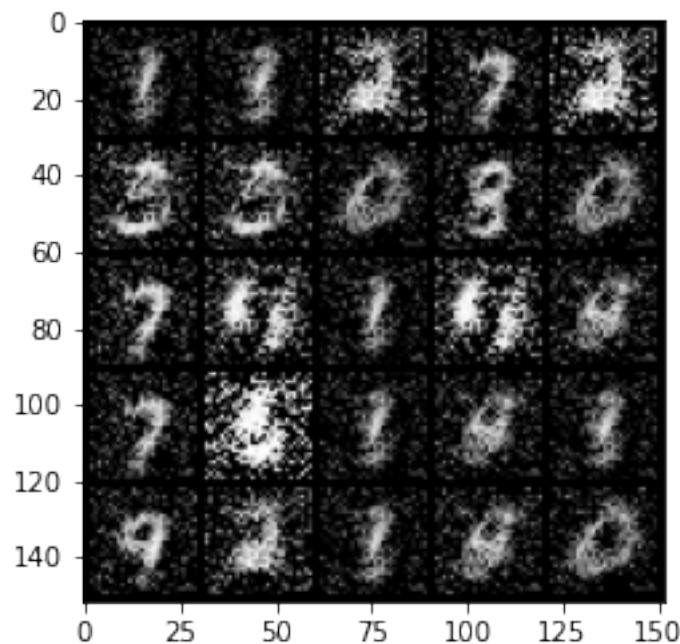
```
100%| 469/469 [00:17<00:00, 26.85it/s]
85%| 398/469 [00:13<00:02, 31.27it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 29, step 14000 -> generator loss: 0.4217550087571145, discriminator loss:
0.7285019527673727
```



```
100%|      | 469/469 [00:16<00:00, 28.65it/s]
91%|      | 429/469 [00:13<00:01, 32.30it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

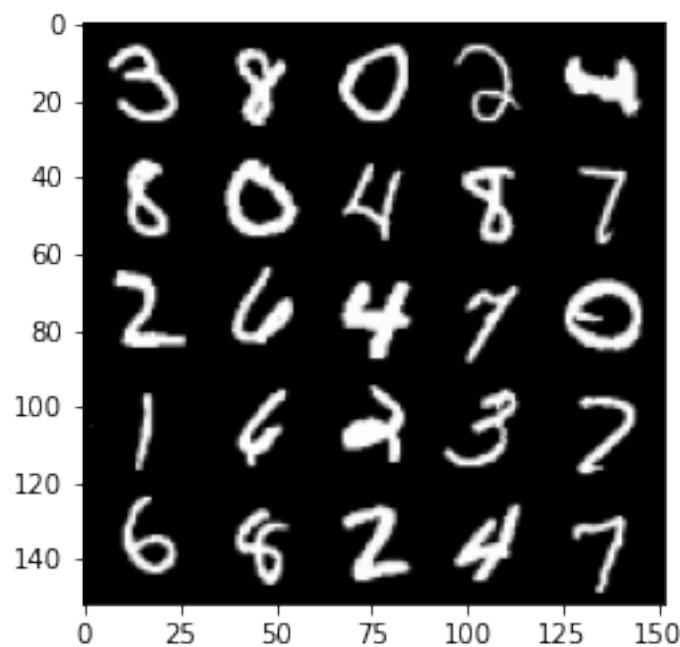
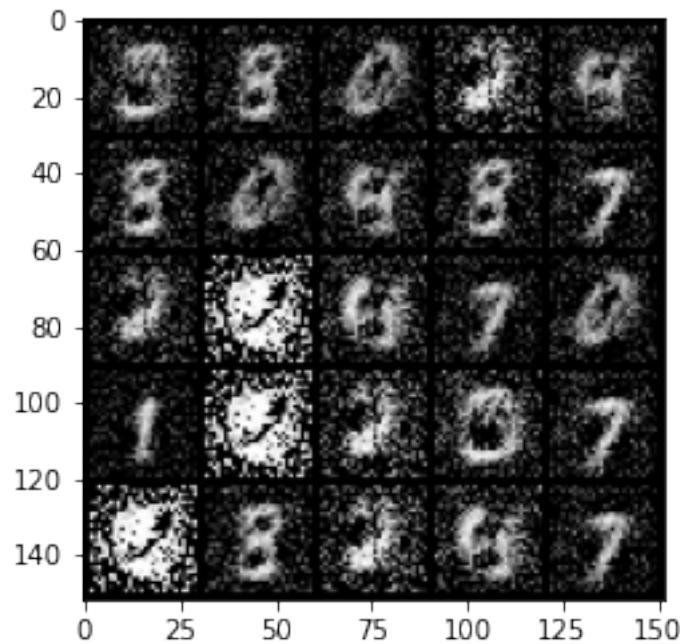
Epoch 30, step 14500 -> generator loss: 0.42328936755657176, discriminator loss: 0.7263089001178743



100% | 469/469 [00:15<00:00, 30.00it/s]

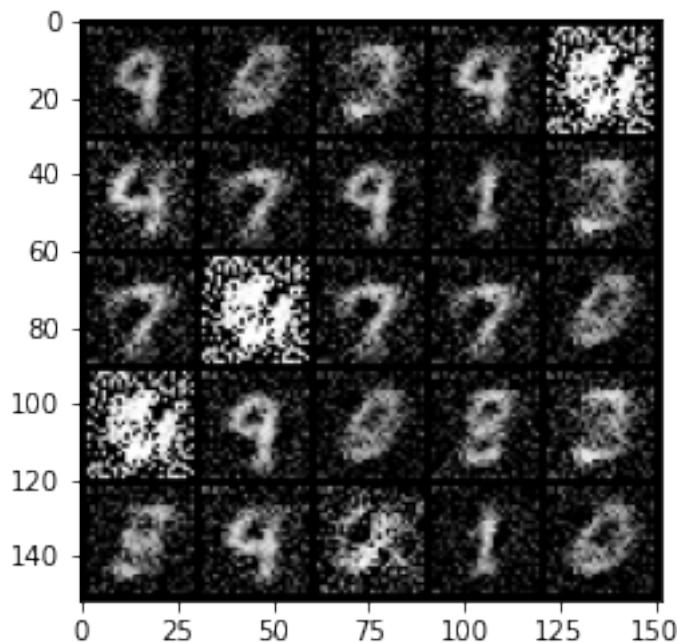
```
98%|      | 460/469 [00:14<00:00, 33.49it/s]Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).
```

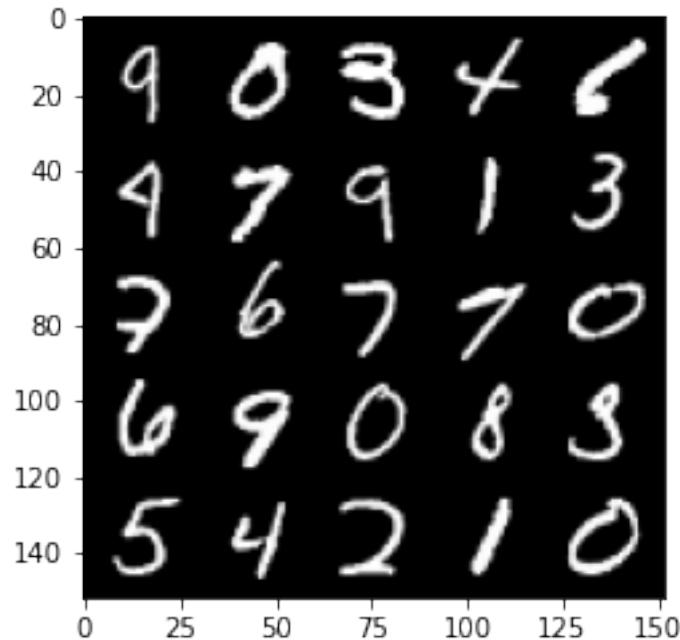
```
Epoch 31, step 15000 -> generator loss: 0.42667965388298007, discriminator loss:  
0.7191541962623591
```



```
100%|   | 469/469 [00:15<00:00, 31.15it/s]
100%|   | 469/469 [00:14<00:00, 31.30it/s]
  5%|   | 22/469 [00:00<00:13, 32.32it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

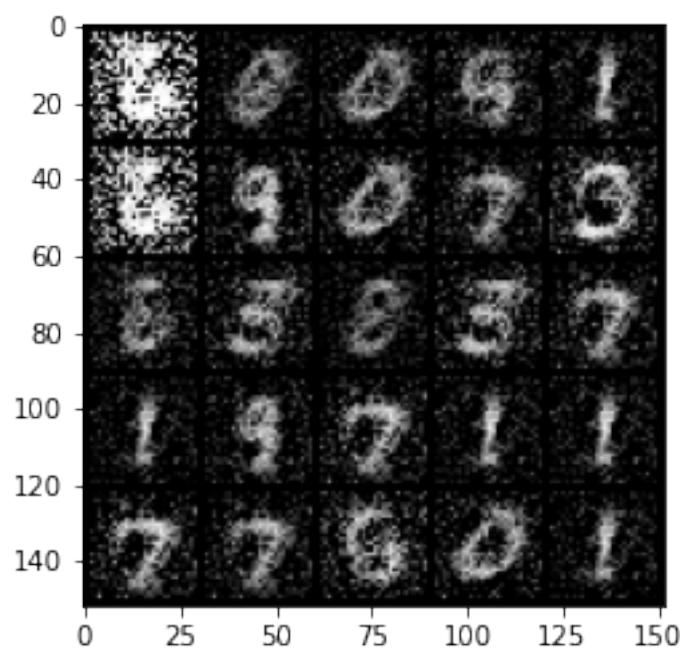
Epoch 33, step 15500 -> generator loss: 0.42725822937488567, discriminator loss:  
0.723130617380142

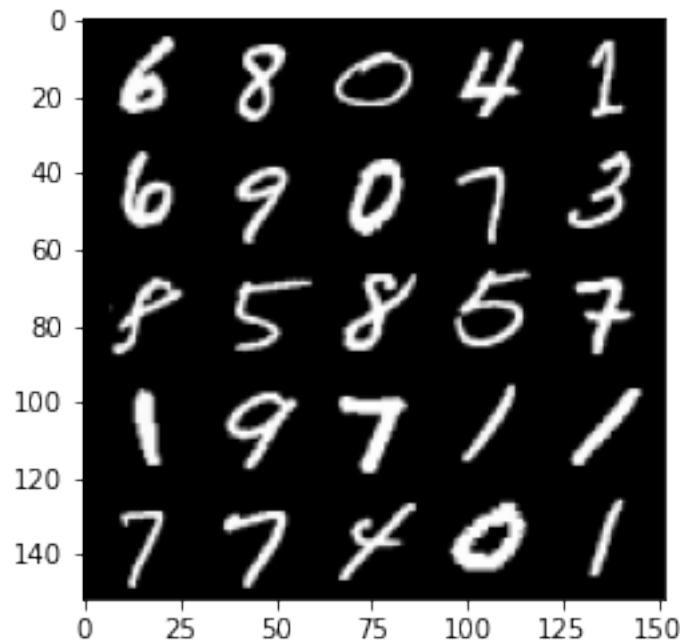




```
100%|      | 469/469 [00:14<00:00, 31.60it/s]
12%|      | 54/469 [00:01<00:12, 34.16it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

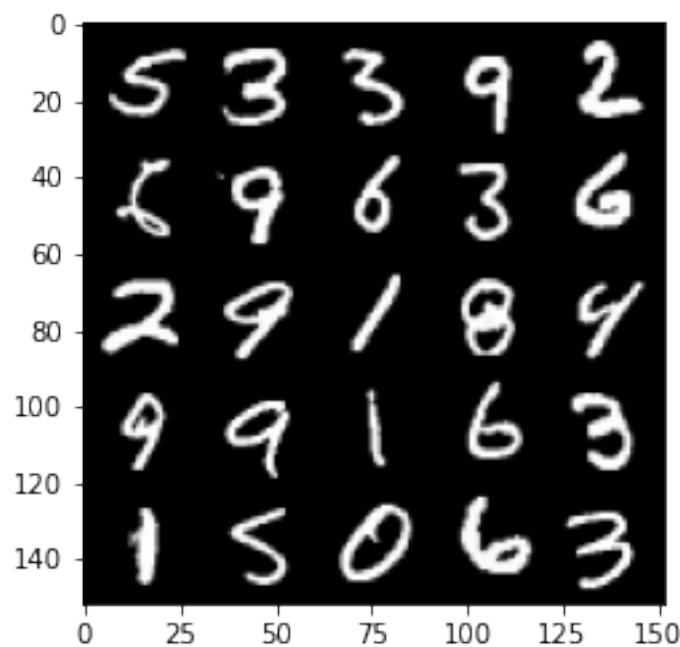
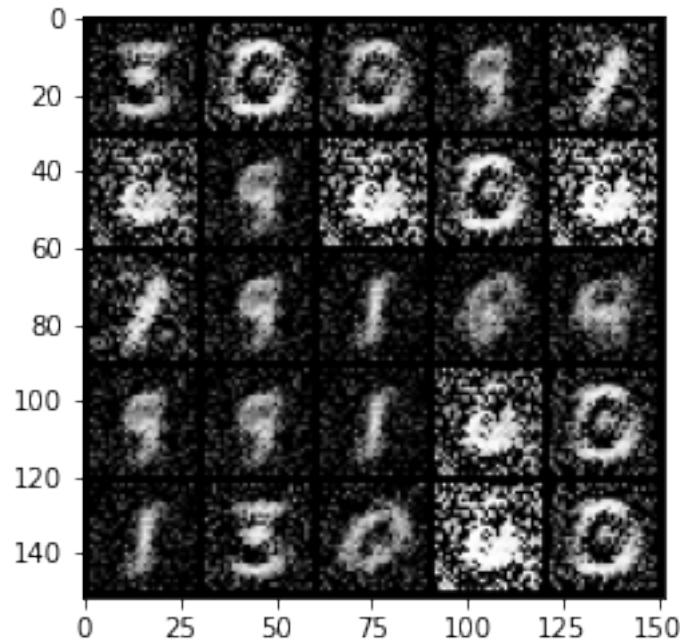
```
Epoch 34, step 16000 -> generator loss: 0.42438975942134843, discriminator loss:
0.7199738073348994
```





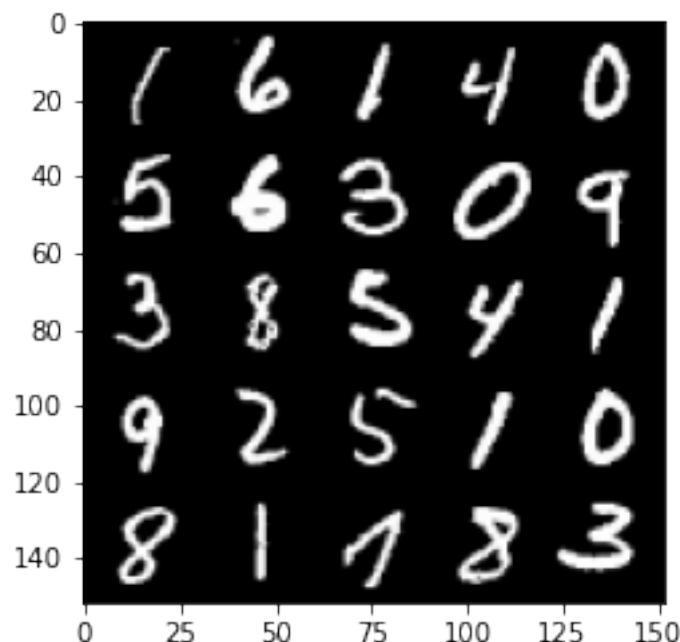
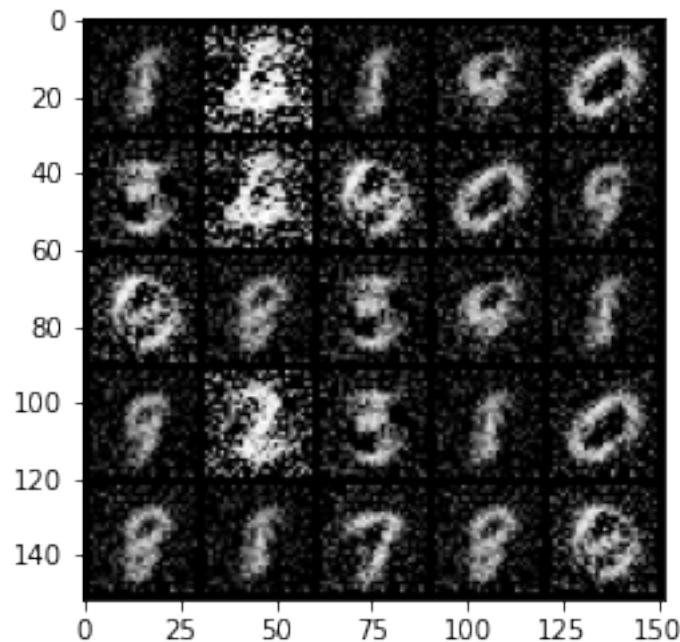
```
100% | 469/469 [00:14<00:00, 31.70it/s]
17% | 82/469 [00:02<00:11, 32.31it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

```
Epoch 35, step 16500 -> generator loss: 0.4290427867770199, discriminator loss:
0.718114555597306
```



```
100%|      | 469/469 [00:15<00:00, 30.89it/s]
24%|      | 113/469 [00:03<00:11, 31.42it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 36, step 17000 -> generator loss: 0.4267628145217894, discriminator loss: 0.723341549277305

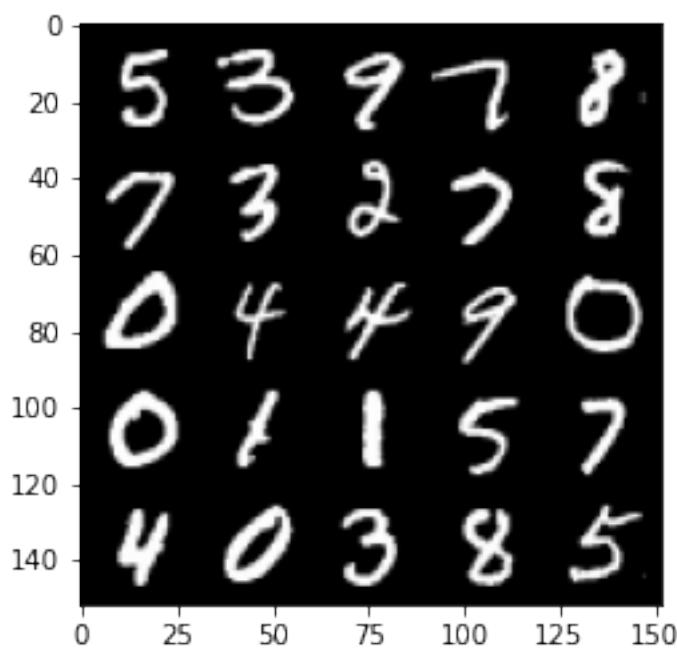
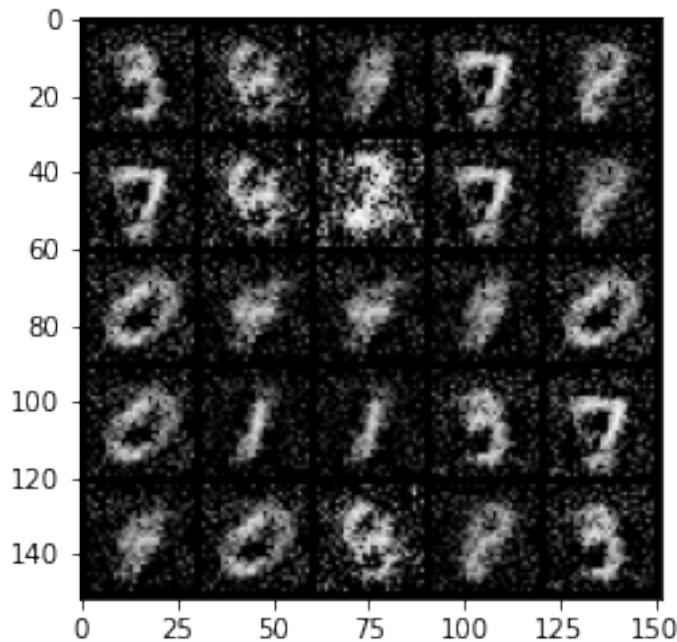


100% | 469/469 [00:15<00:00, 29.48it/s]

31% | 146/469 [00:05<00:16, 19.00it/s]

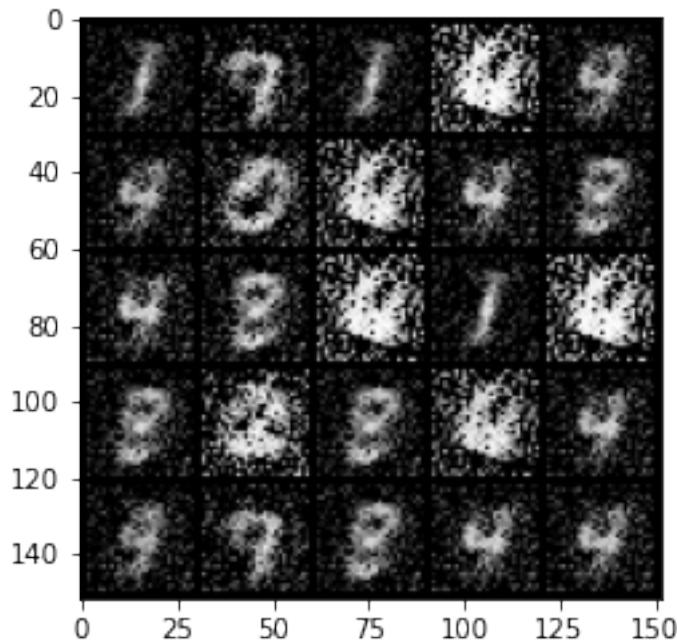
Epoch 37, step 17500 -> generator loss: 0.4236656630635263, discriminator loss: 0.7247442698478692

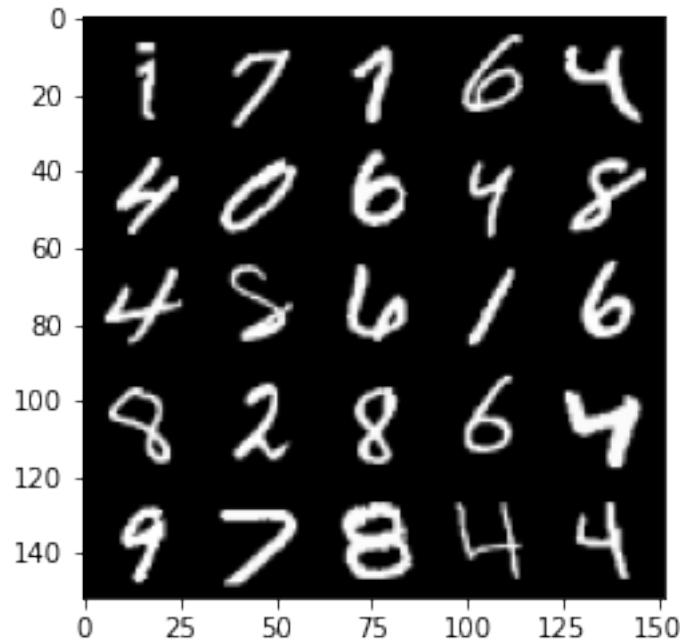
Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).



```
100%|      | 469/469 [00:20<00:00, 23.30it/s]
38%|      | 177/469 [00:05<00:09, 30.17it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

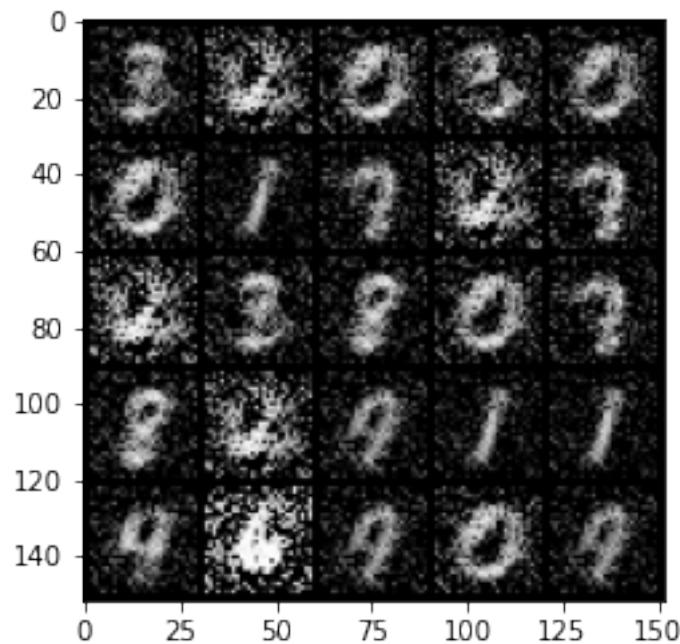
```
Epoch 38, step 18000 -> generator loss: 0.4217078229188918, discriminator loss:
0.7258842782974237
```

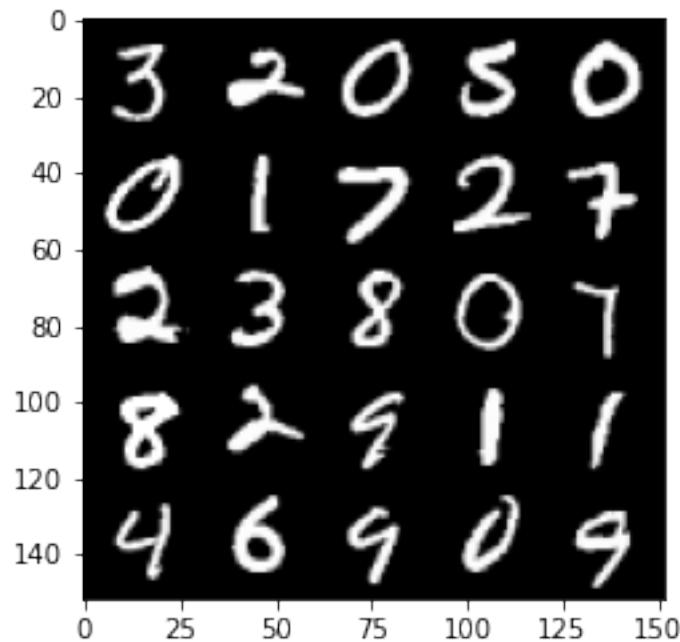




```
100%|      | 469/469 [00:16<00:00, 28.92it/s]
44%|      | 208/469 [00:07<00:08, 30.94it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

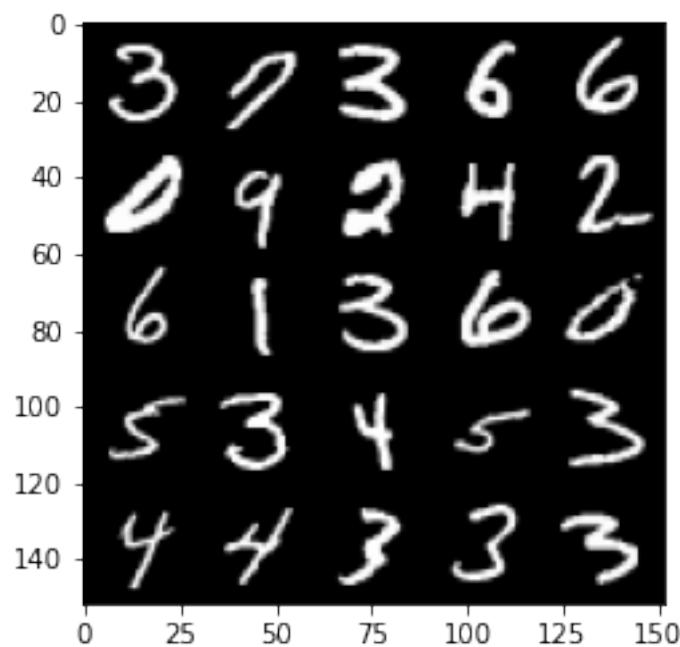
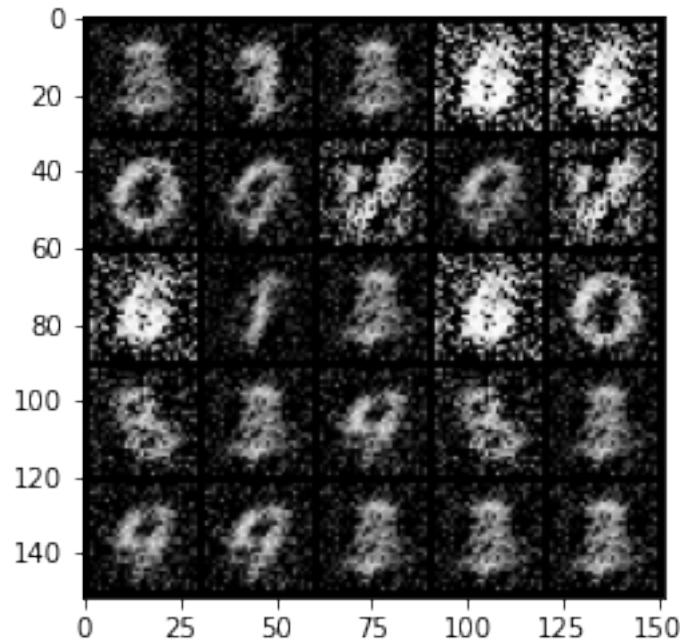
Epoch 39, step 18500 -> generator loss: 0.4249048800468446, discriminator loss:  
0.7199817692041401





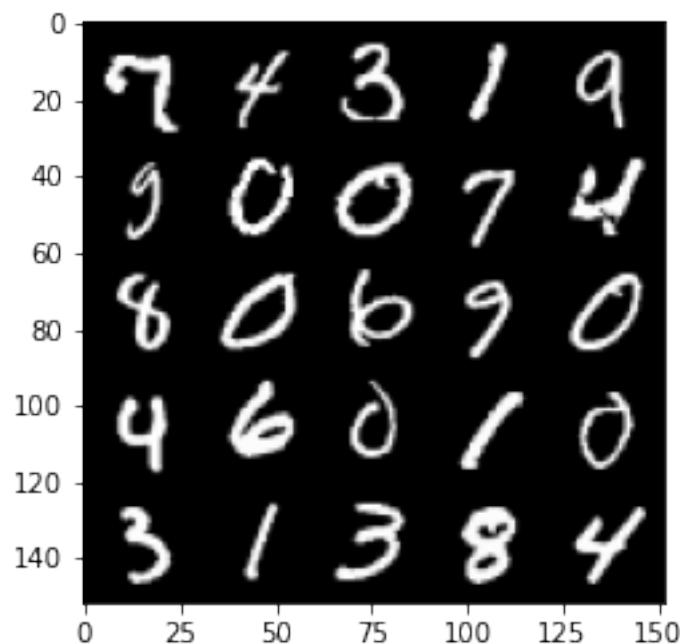
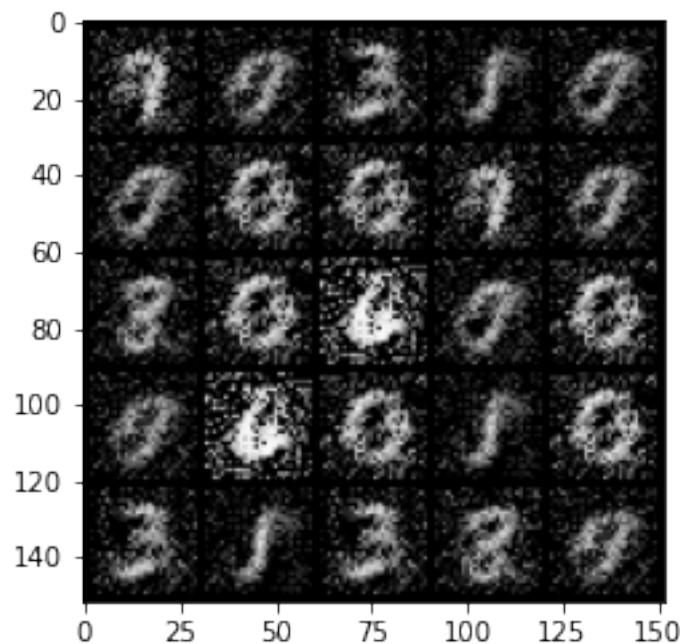
```
100% | 469/469 [00:16<00:00, 28.89it/s]
51% | 240/469 [00:07<00:07, 29.11it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 40, step 19000 -> generator loss: 0.4239844048023223, discriminator loss:
0.7224857555627827
```



```
100%|      | 469/469 [00:16<00:00, 28.46it/s]
57%|      | 269/469 [00:09<00:07, 28.07it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

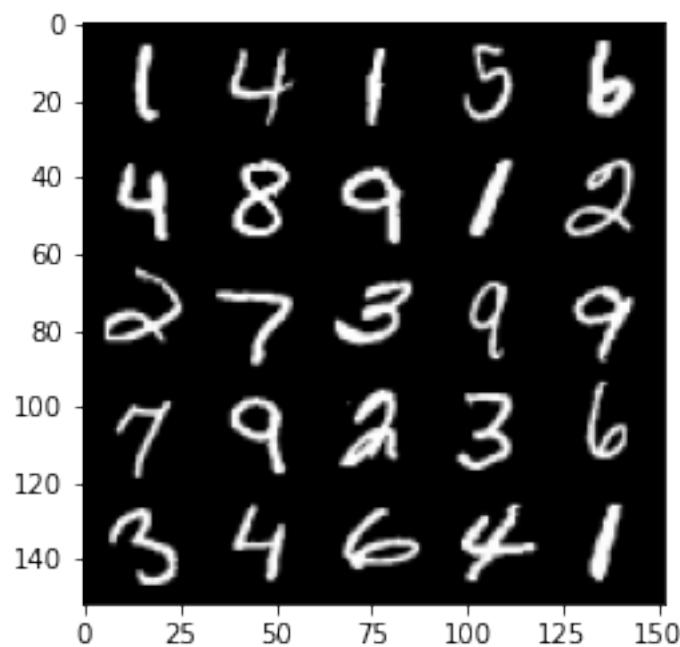
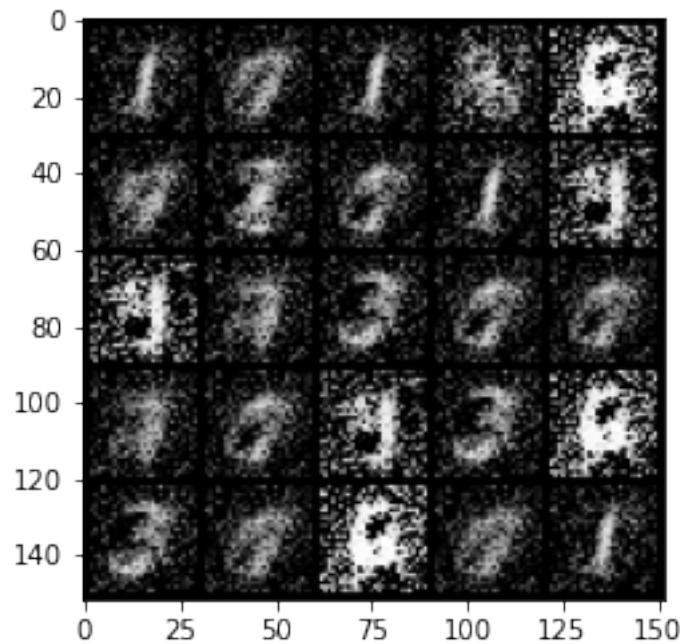
Epoch 41, step 19500 -> generator loss: 0.4291290156245232, discriminator loss: 0.719302598237991



100% | 469/469 [00:17<00:00, 27.27it/s]

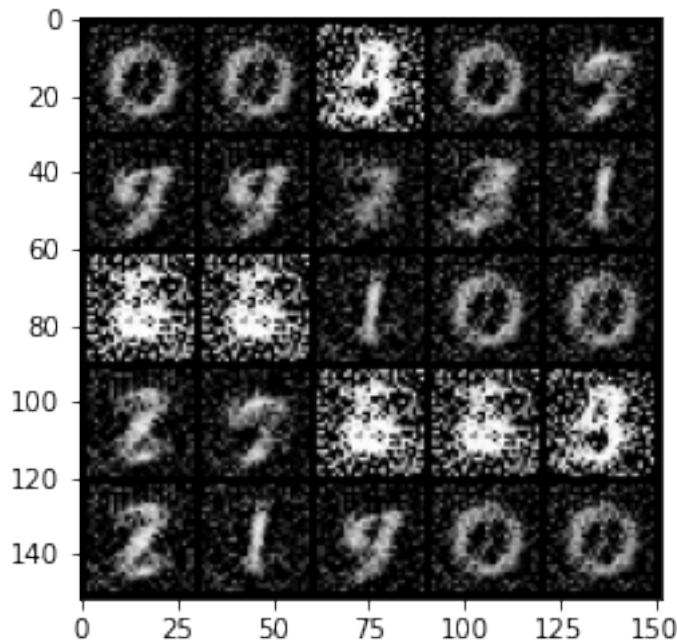
64%| 302/469 [00:10<00:05, 29.03it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

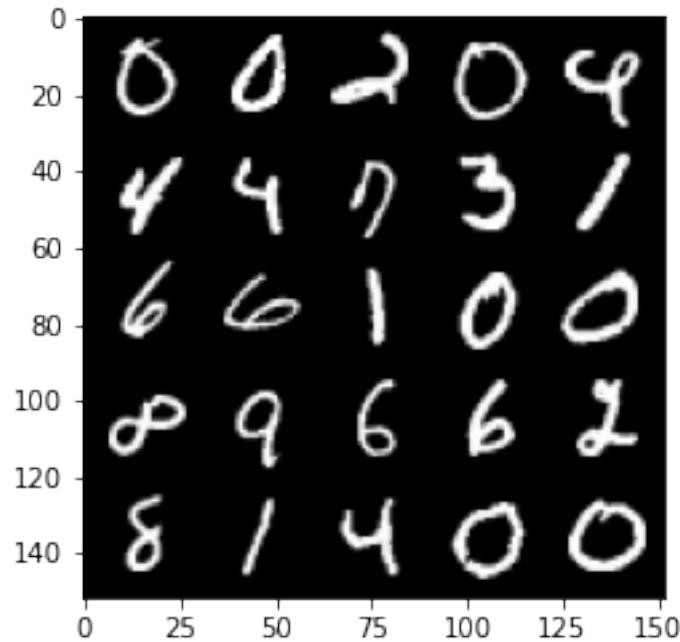
Epoch 42, step 20000 -> generator loss: 0.43071621489524825, discriminator loss: 0.7114564442634588



```
100%|      | 469/469 [00:16<00:00, 28.43it/s]
71%|      | 333/469 [00:11<00:04, 29.69it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

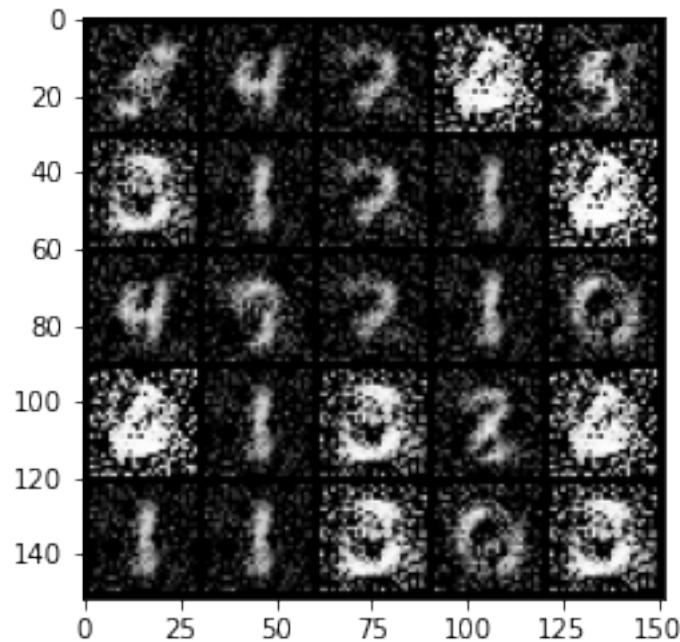
Epoch 43, step 20500 -> generator loss: 0.43385943889617934, discriminator loss:  
0.7047075483798981

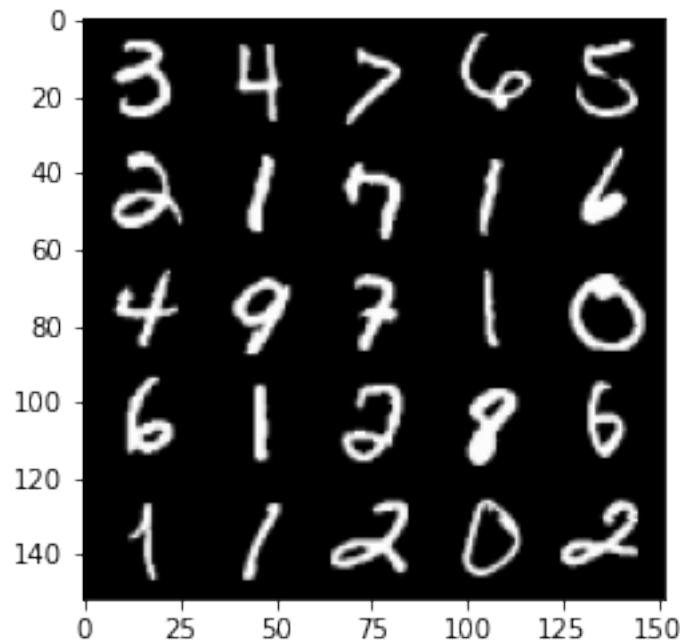




```
100%|      | 469/469 [00:16<00:00, 27.60it/s]
77%|      | 363/469 [00:12<00:03, 30.50it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

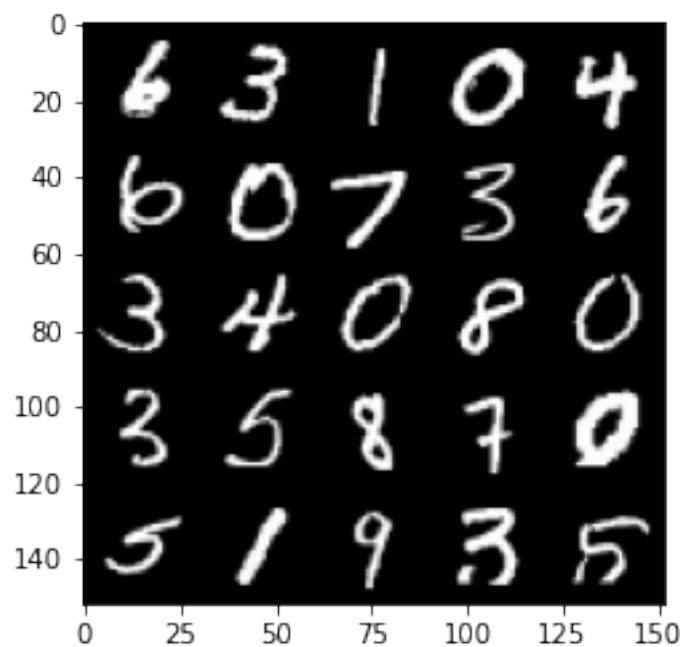
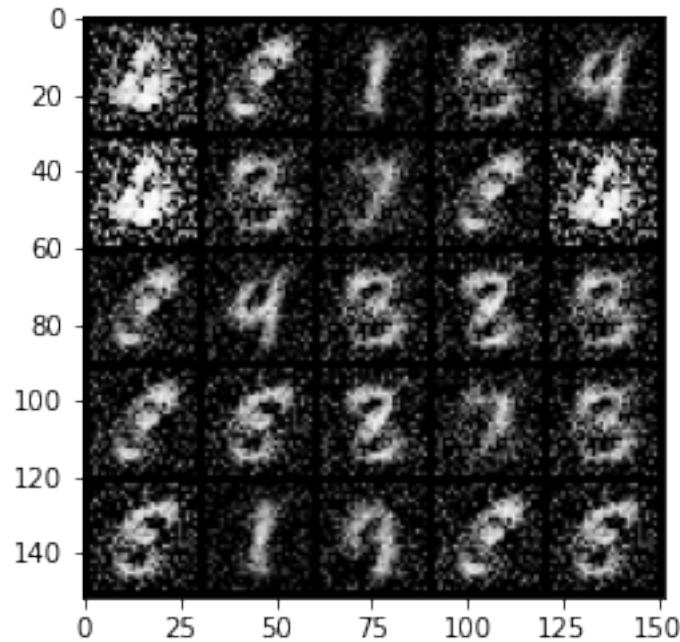
```
Epoch 44, step 21000 -> generator loss: 0.4321309981346131, discriminator loss:
0.7123322844505319
```





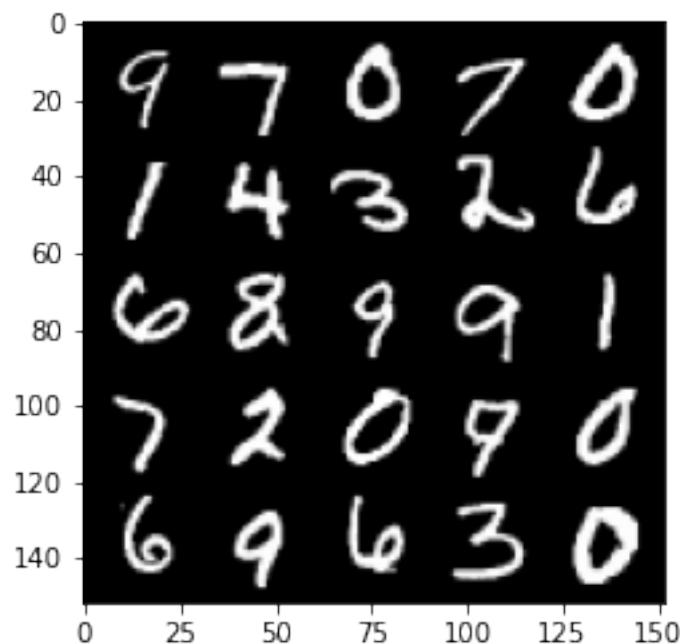
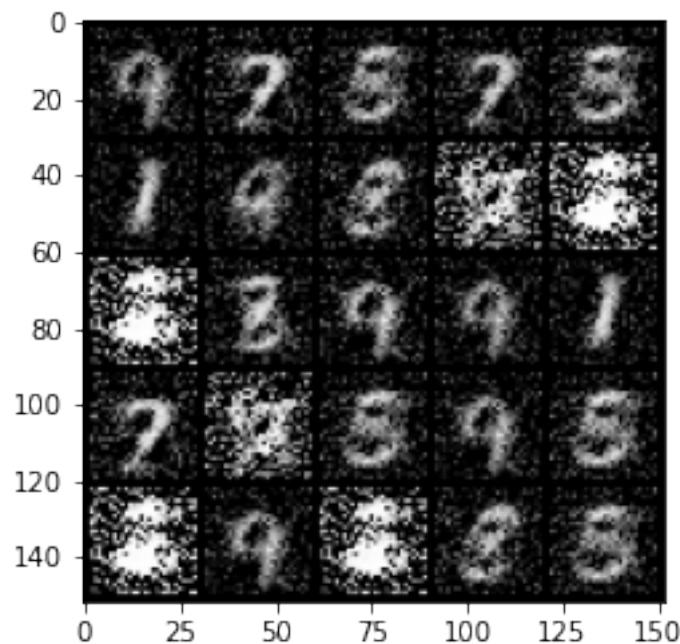
```
100%|   | 469/469 [00:16<00:00, 28.95it/s]
84%|   | 394/469 [00:12<00:02, 31.30it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 45, step 21500 -> generator loss: 0.4314915698766707, discriminator loss:
0.7129373087882991
```



```
100%| 469/469 [00:15<00:00, 29.65it/s]
90%| 424/469 [00:14<00:01, 31.91it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

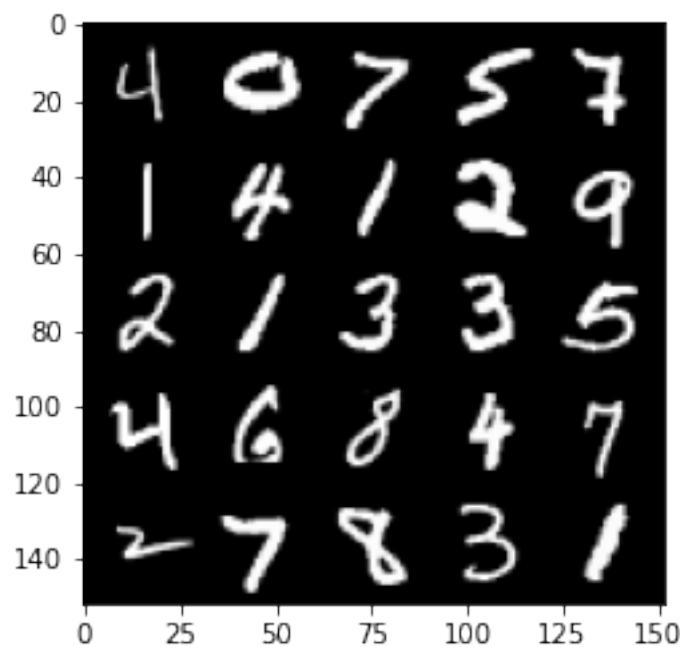
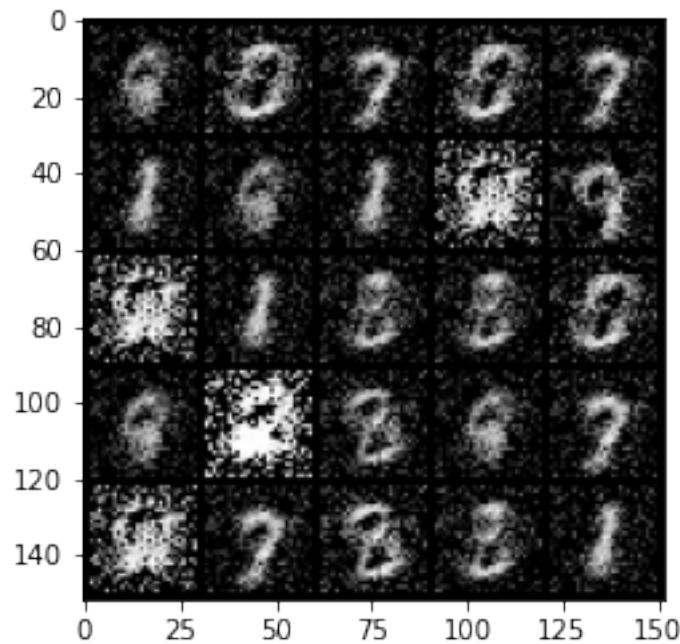
Epoch 46, step 22000 -> generator loss: 0.4358745891451835, discriminator loss: 0.7109679604768746



100% | 469/469 [00:15<00:00, 29.42it/s]

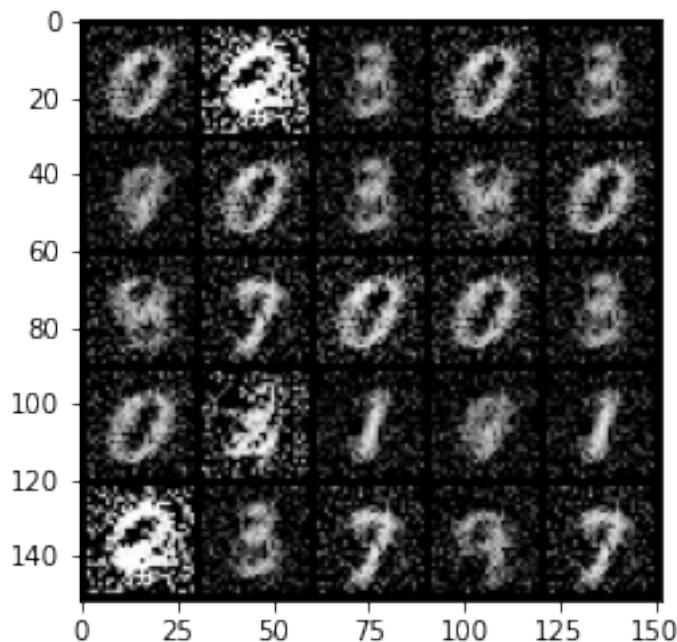
97%| 457/469 [00:17<00:00, 30.70it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

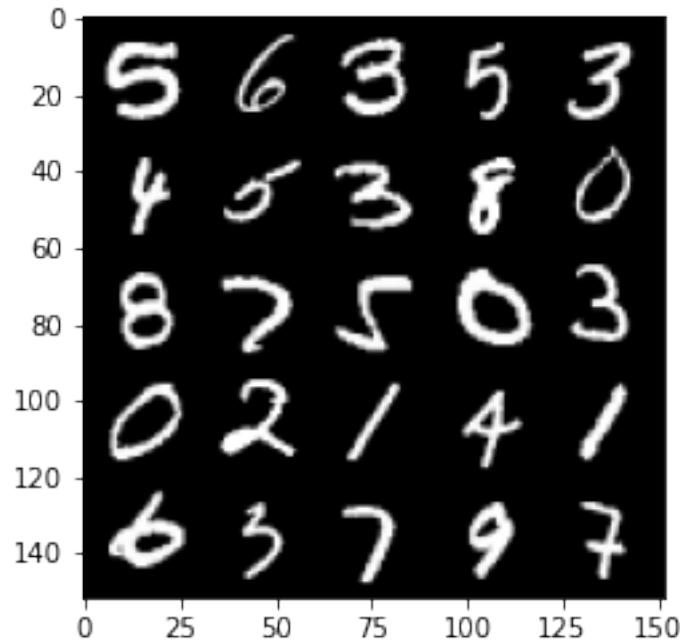
Epoch 47, step 22500 -> generator loss: 0.4358259267807009, discriminator loss: 0.7072648711204534



```
100%|    | 469/469 [00:18<00:00, 25.62it/s]
100%|    | 469/469 [00:16<00:00, 29.29it/s]
  4%|    | 17/469 [00:00<00:16, 28.04it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

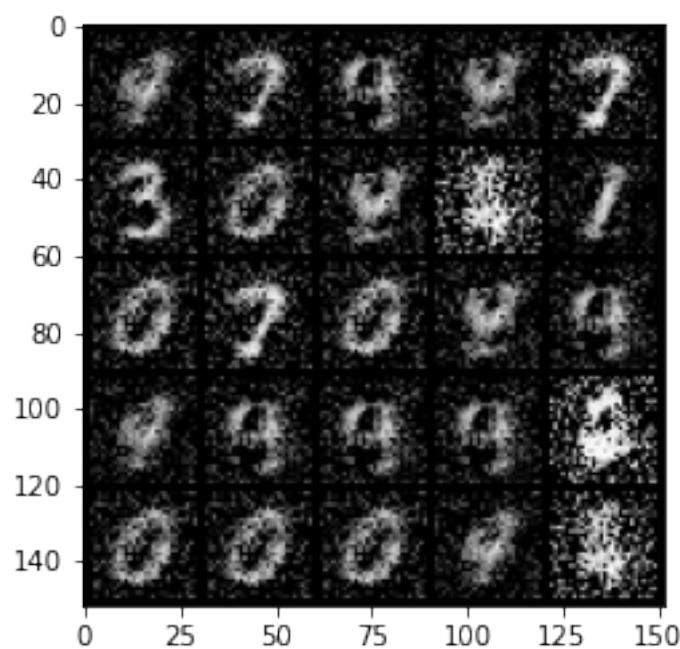
```
Epoch 49, step 23000 -> generator loss: 0.43765010029077556, discriminator loss:
0.7054151998758311
```

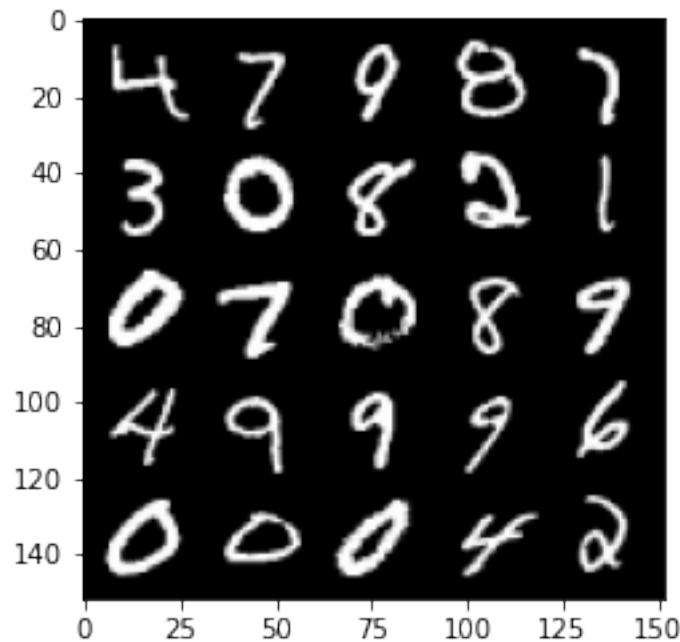




```
100%|      | 469/469 [00:16<00:00, 28.83it/s]
10%|      | 48/469 [00:01<00:14, 29.21it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

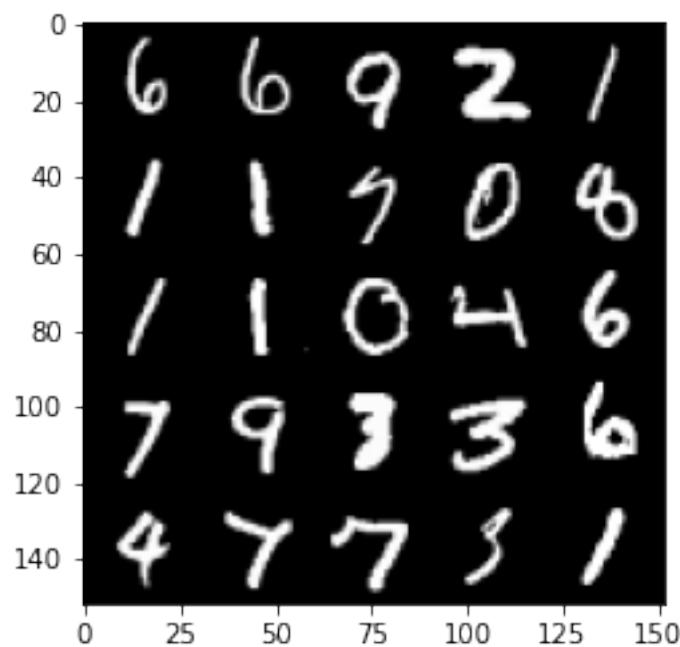
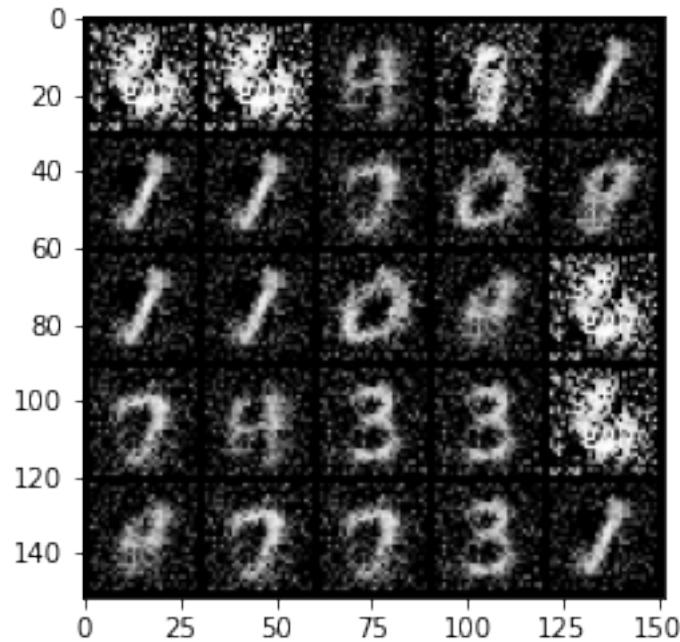
```
Epoch 50, step 23500 -> generator loss: 0.4313146619200706, discriminator loss:
0.7121327332258225
```





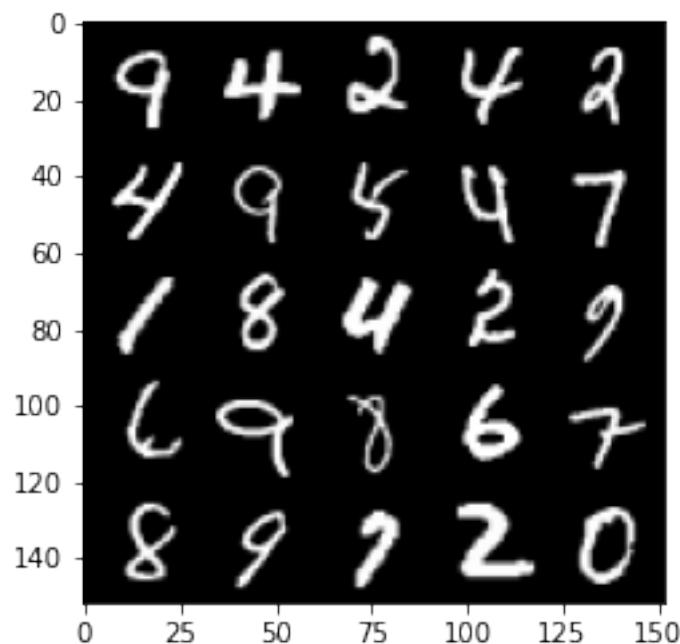
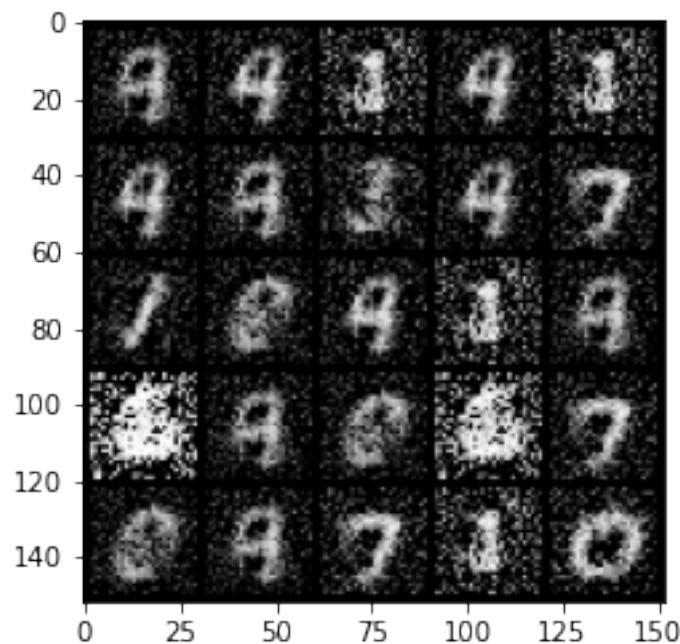
```
100% | 469/469 [00:16<00:00, 29.11it/s]
17% | 79/469 [00:02<00:12, 30.40it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

```
Epoch 51, step 24000 -> generator loss: 0.4298547574877741, discriminator loss:
0.7143832942247389
```



```
100%| 469/469 [00:15<00:00, 29.38it/s]
23%| 110/469 [00:03<00:11, 30.14it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

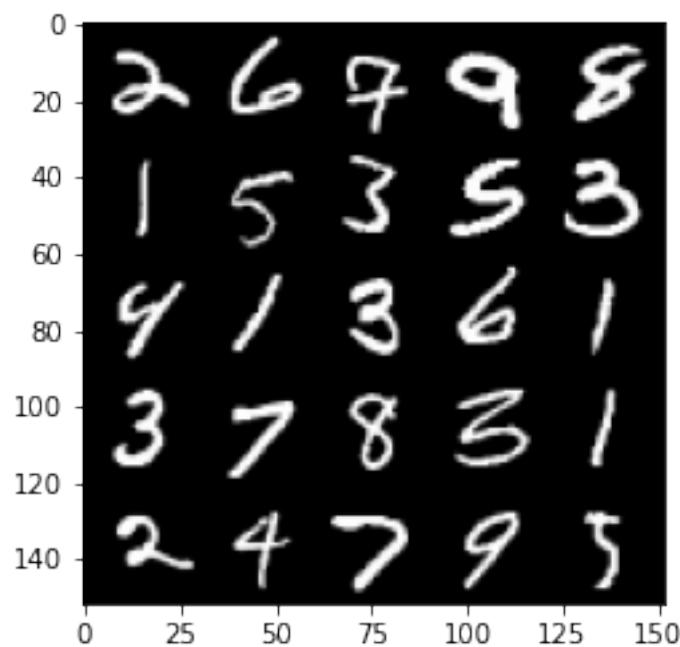
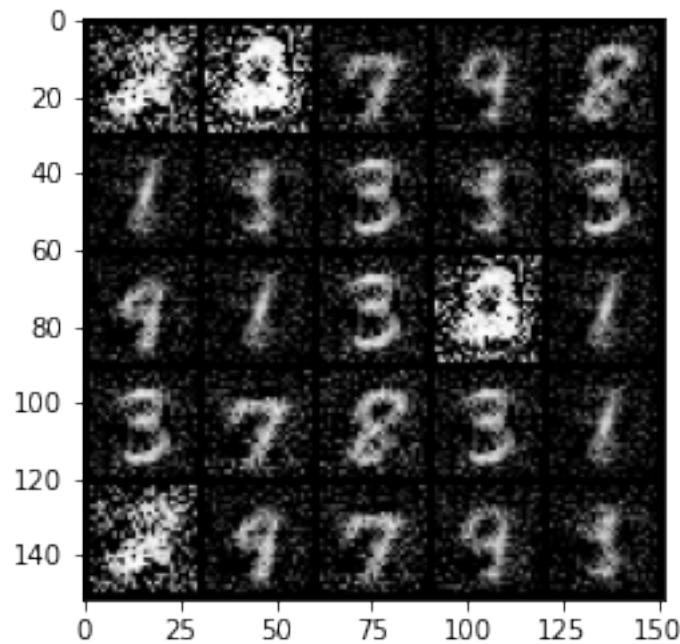
Epoch 52, step 24500 -> generator loss: 0.43041401588916806, discriminator loss: 0.7131169461011888



100% | 469/469 [00:15<00:00, 29.31it/s]

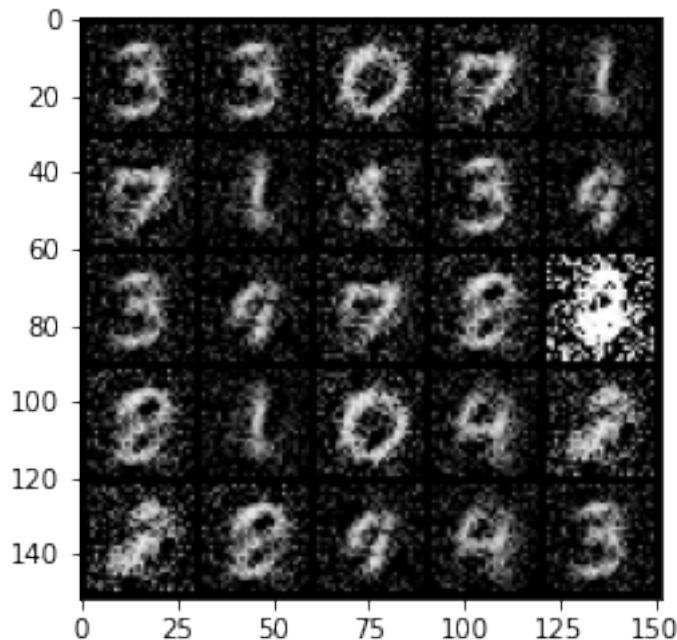
30%| 143/469 [00:04<00:10, 30.88it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

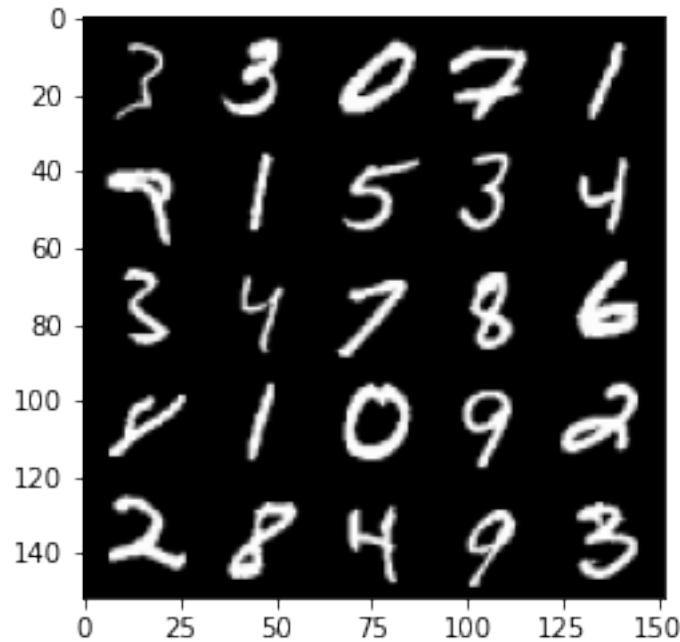
Epoch 53, step 25000 -> generator loss: 0.4272874072790145, discriminator loss: 0.7194920477867126



```
100%|      | 469/469 [00:15<00:00, 29.41it/s]
36%|      | 171/469 [00:05<00:10, 28.19it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

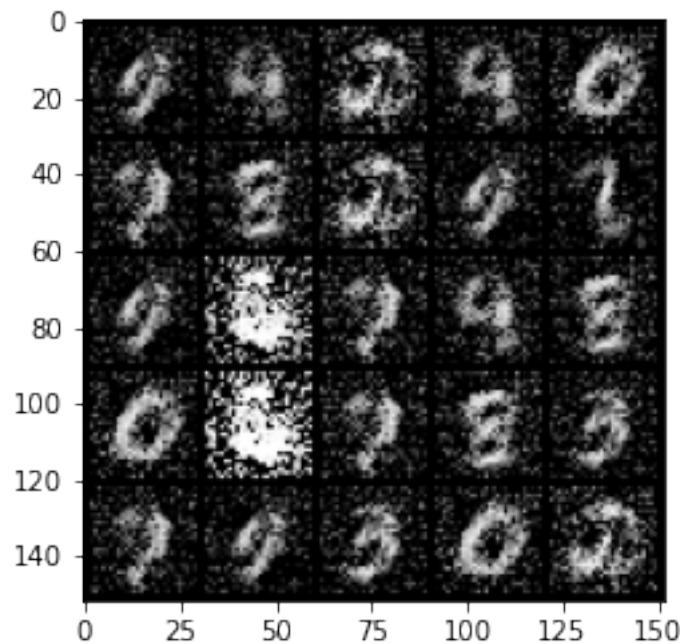
Epoch 54, step 25500 -> generator loss: 0.43178297603130333, discriminator loss:  
0.7126164052486417

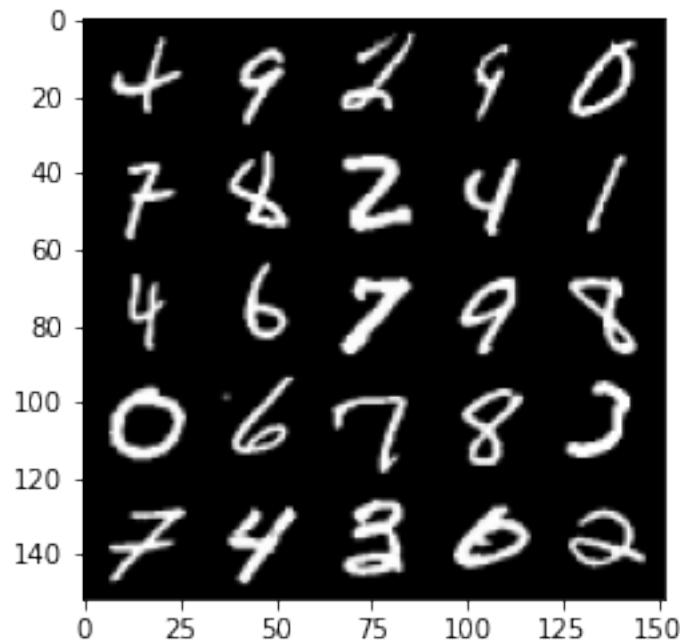




```
100%|      | 469/469 [00:16<00:00, 29.20it/s]
43%|      | 203/469 [00:06<00:08, 29.98it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

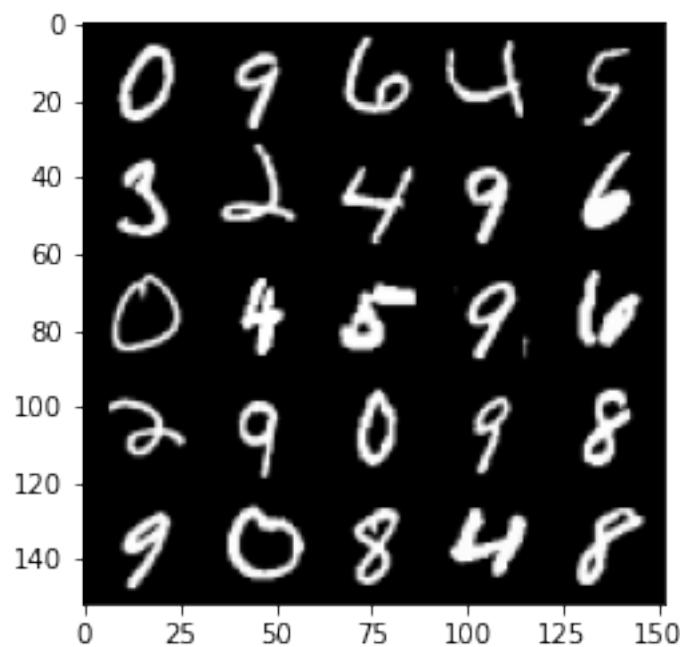
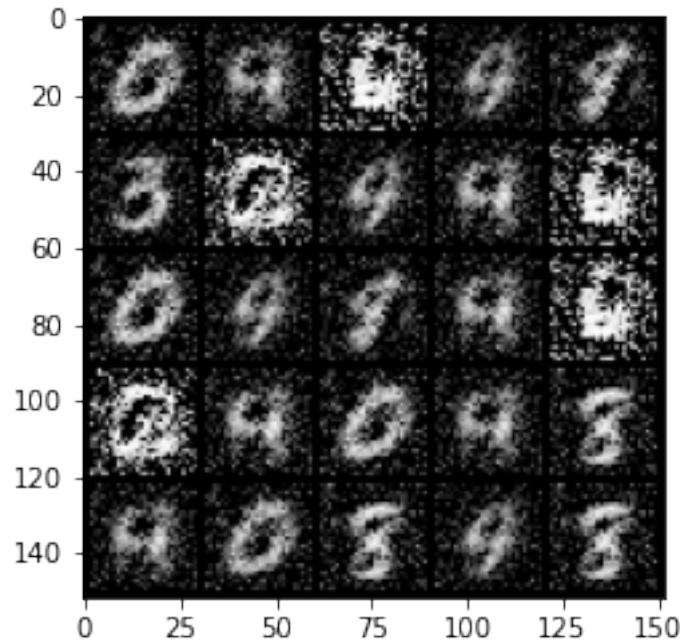
```
Epoch 55, step 26000 -> generator loss: 0.4288879580497742, discriminator loss:
0.7165244551897055
```





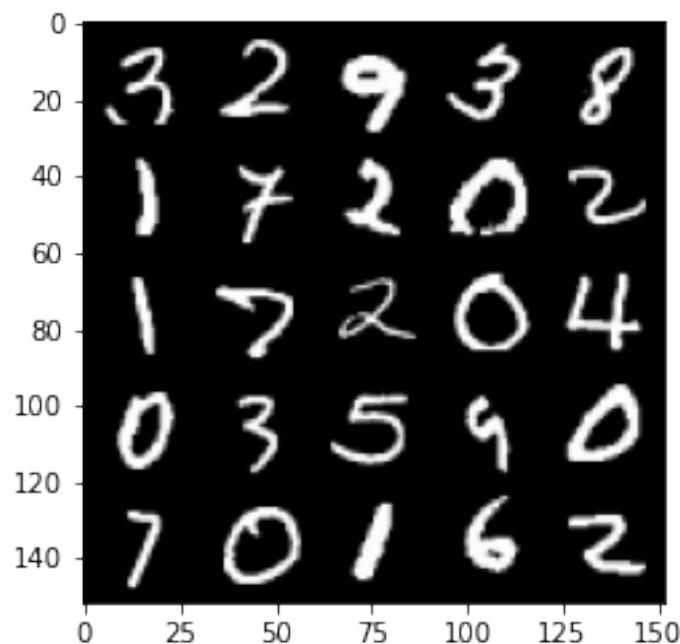
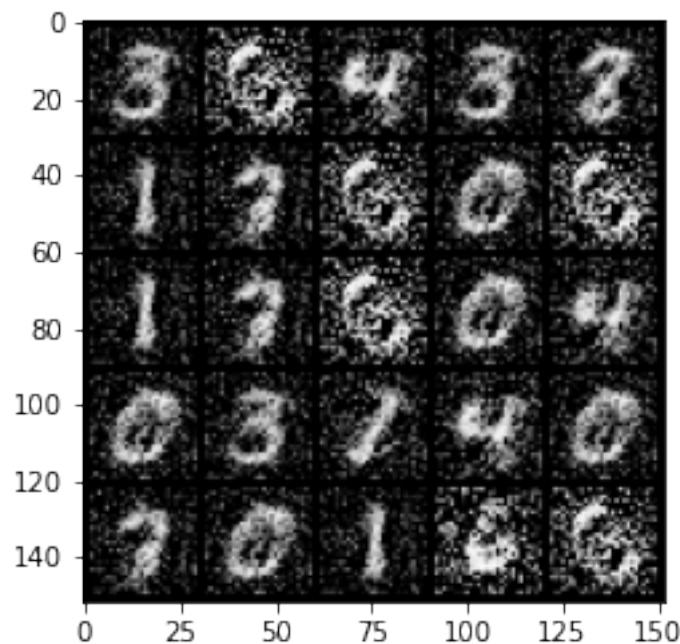
```
100% | 469/469 [00:16<00:00, 29.30it/s]
50% | 236/469 [00:07<00:07, 29.91it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 56, step 26500 -> generator loss: 0.4322714186310769, discriminator loss:
0.7193168227672586
```



```
100%|      | 469/469 [00:15<00:00, 29.38it/s]
 57%|      | 265/469 [00:08<00:06, 30.59it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

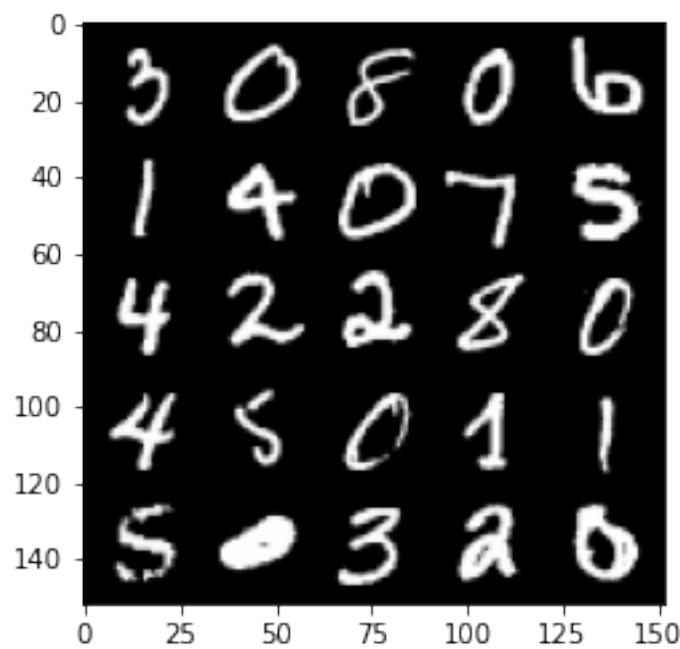
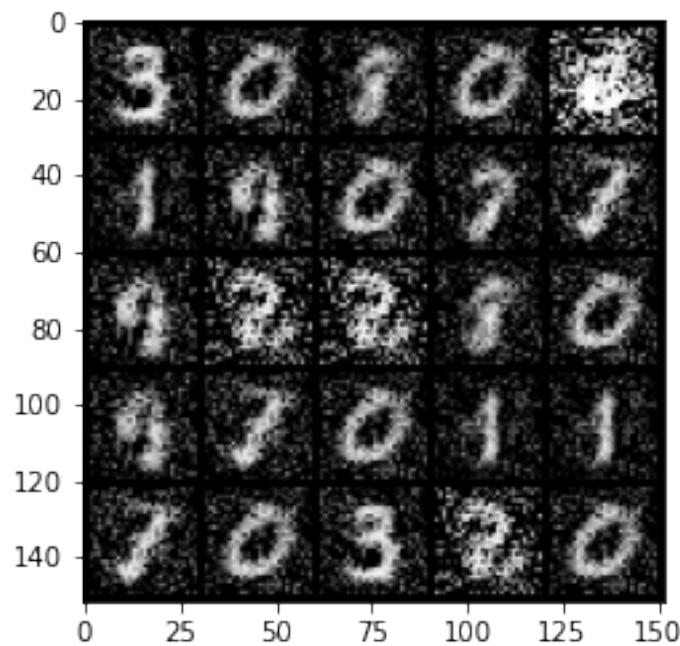
Epoch 57, step 27000 -> generator loss: 0.4345513305664062, discriminator loss: 0.7164850240945817



100% | 469/469 [00:16<00:00, 28.62it/s]

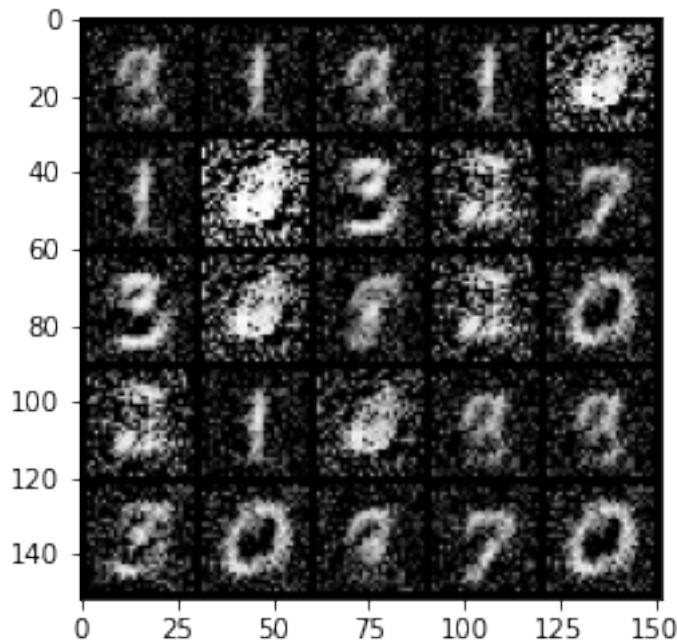
63%| 295/469 [00:09<00:05, 30.48it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

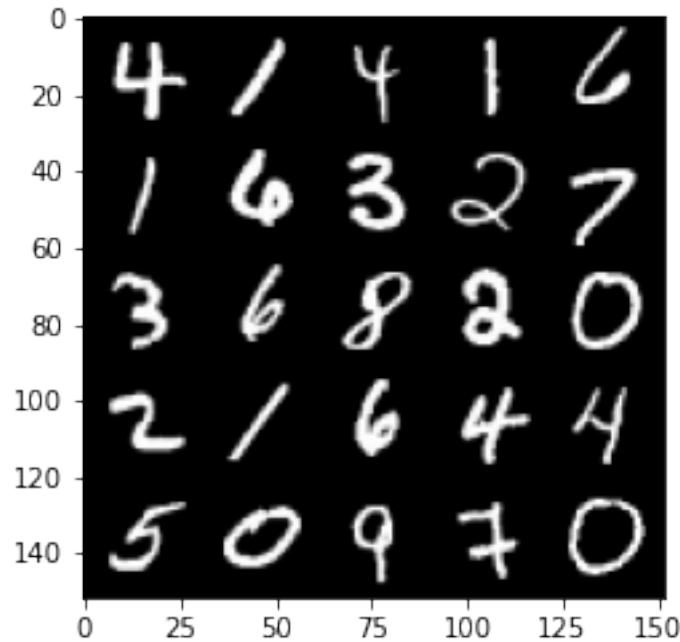
Epoch 58, step 27500 -> generator loss: 0.4392051582336425, discriminator loss: 0.7059899718761443



```
100%|      | 469/469 [00:15<00:00, 29.44it/s]
70%|      | 328/469 [00:10<00:04, 30.12it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

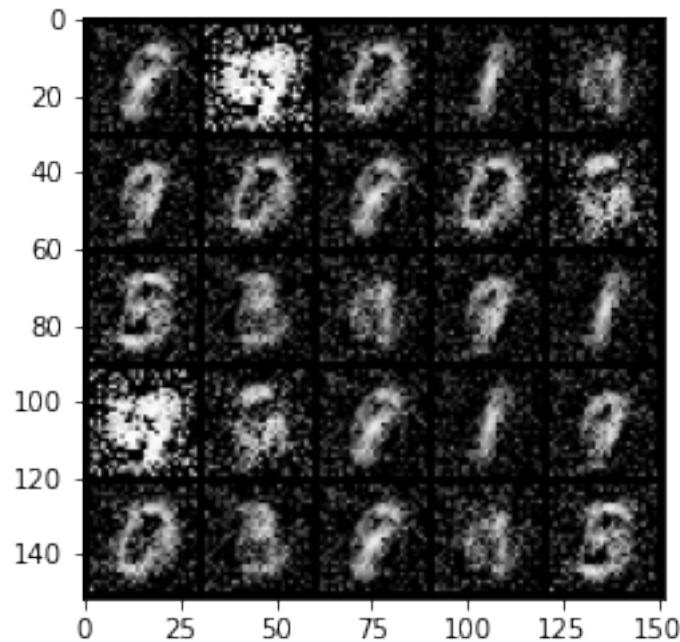
Epoch 59, step 28000 -> generator loss: 0.4332705061435695, discriminator loss: 0.712706658363342

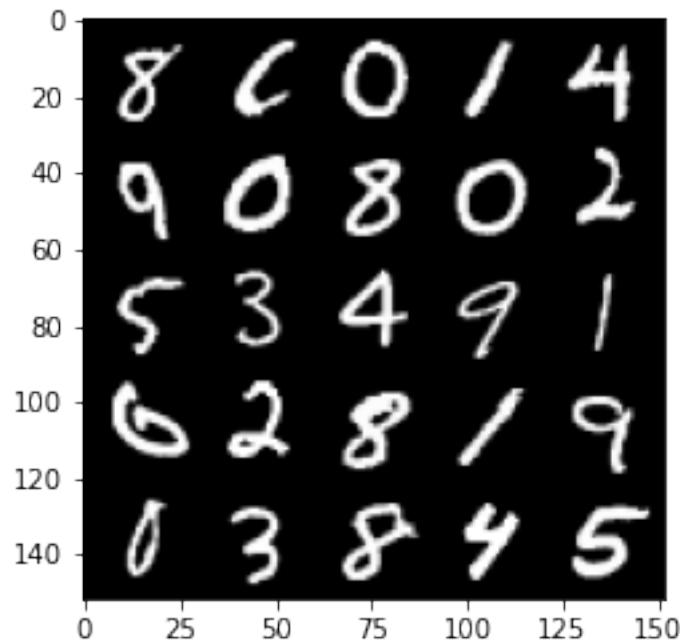




```
100%|      | 469/469 [00:15<00:00, 29.35it/s]
76%|      | 358/469 [00:11<00:03, 30.84it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

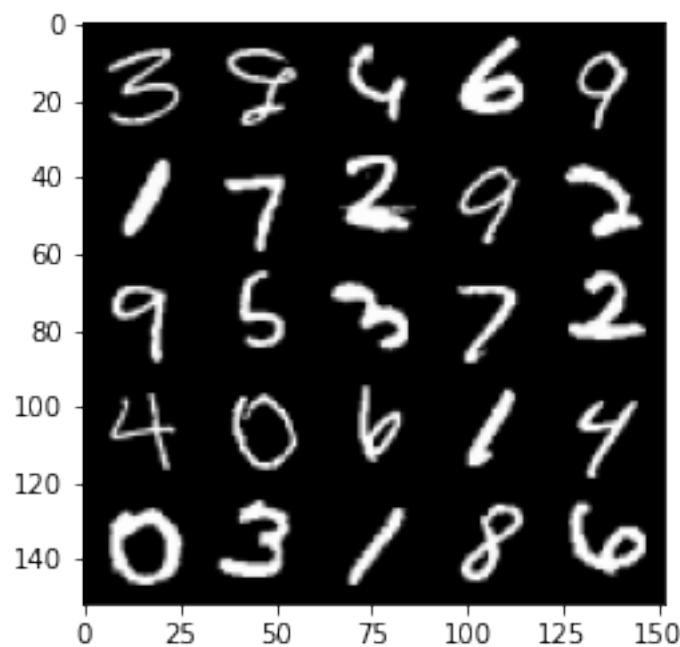
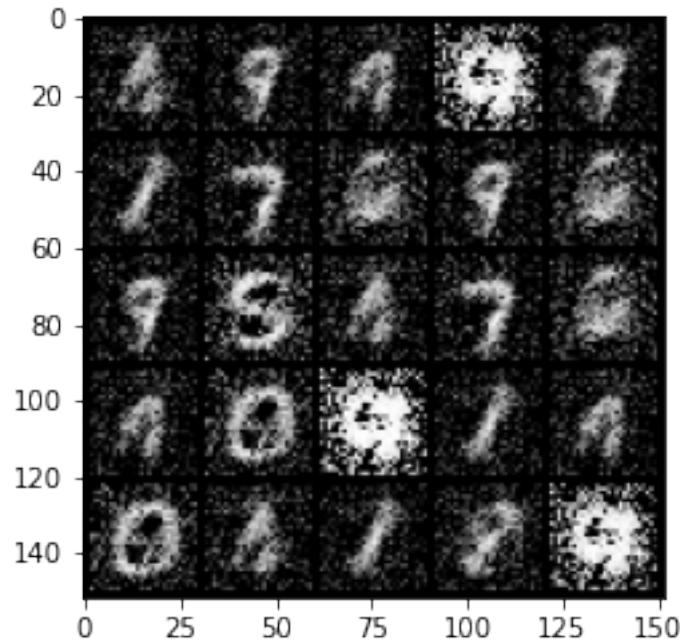
```
Epoch 60, step 28500 -> generator loss: 0.42604150301218063, discriminator loss:
0.7181886714696882
```





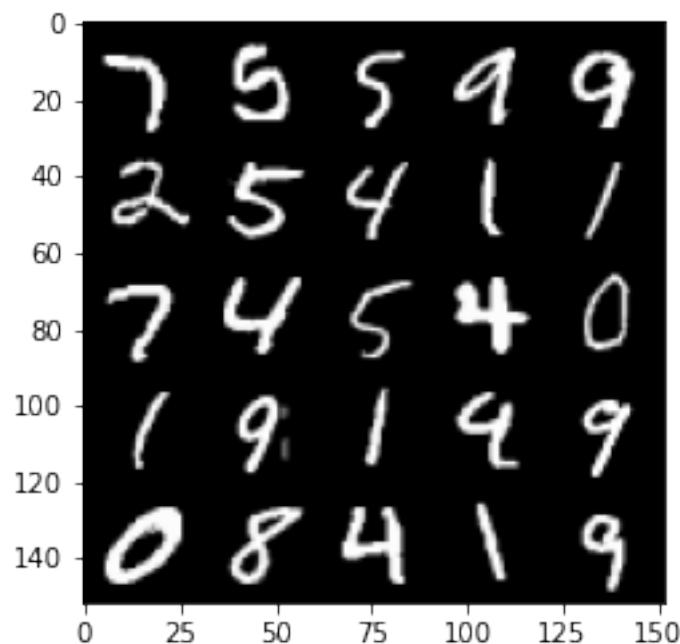
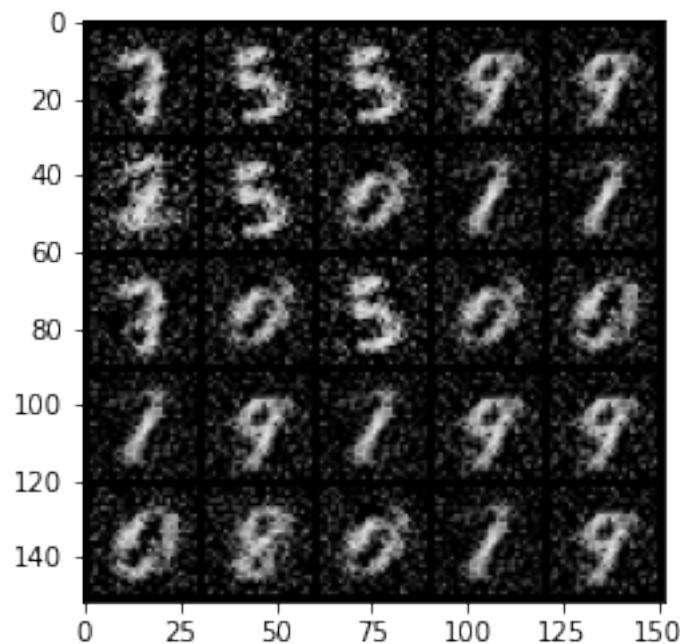
```
100%| 469/469 [00:16<00:00, 29.15it/s]
83%| 391/469 [00:12<00:02, 30.18it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 61, step 29000 -> generator loss: 0.42206627875566477, discriminator loss:
0.7237144154310223
```



```
100%|      | 469/469 [00:15<00:00, 29.31it/s]
90%|      | 422/469 [00:14<00:01, 30.18it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

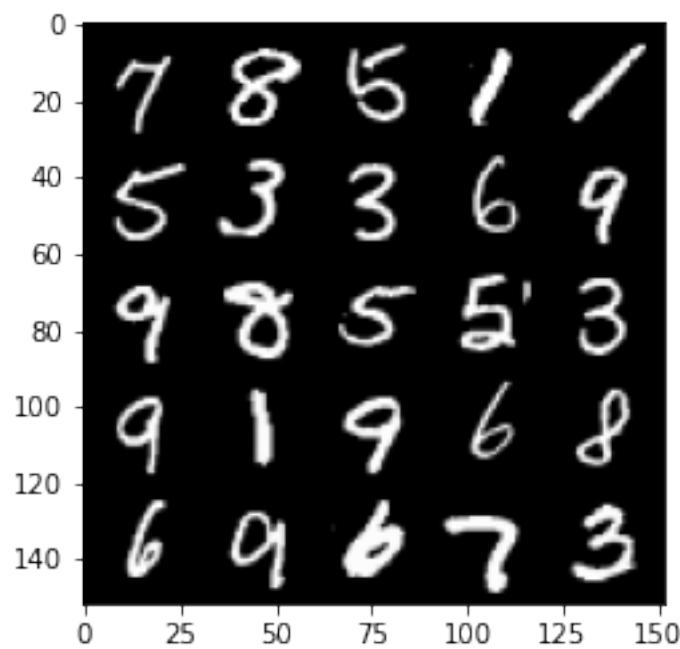
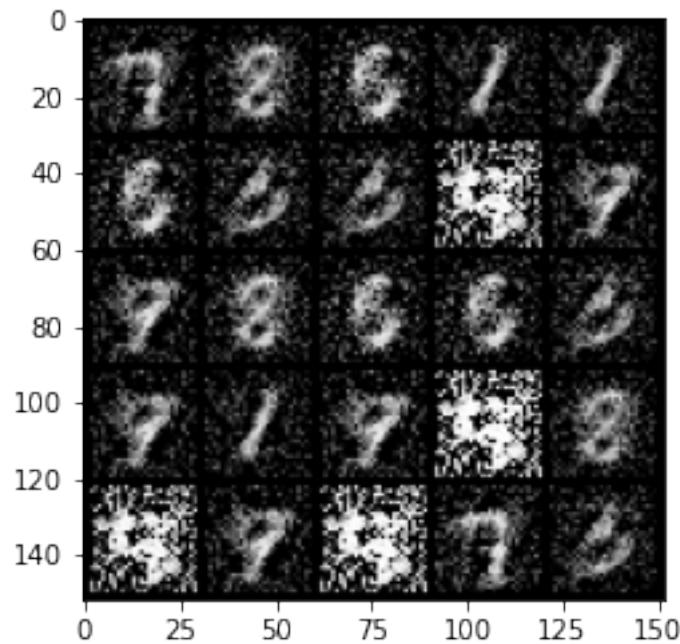
Epoch 62, step 29500 -> generator loss: 0.4330301473140717, discriminator loss: 0.7125893472433088



100% | 469/469 [00:16<00:00, 29.11it/s]

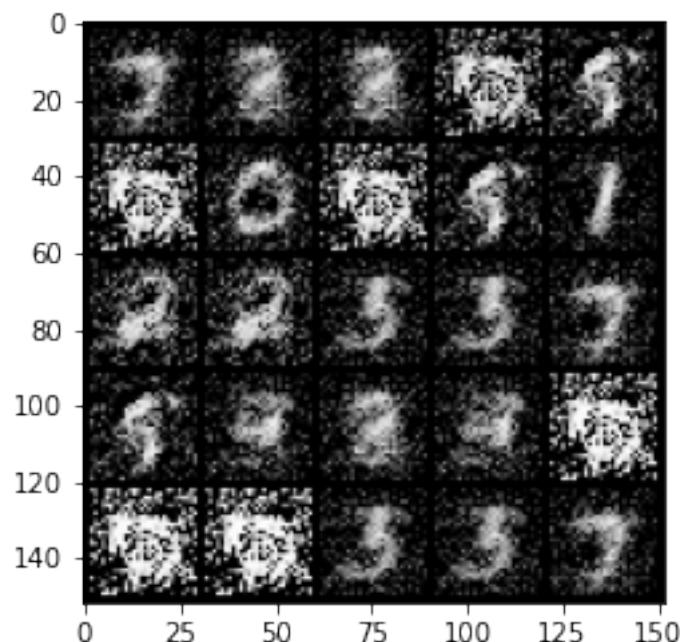
96%| 451/469 [00:14<00:00, 31.16it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

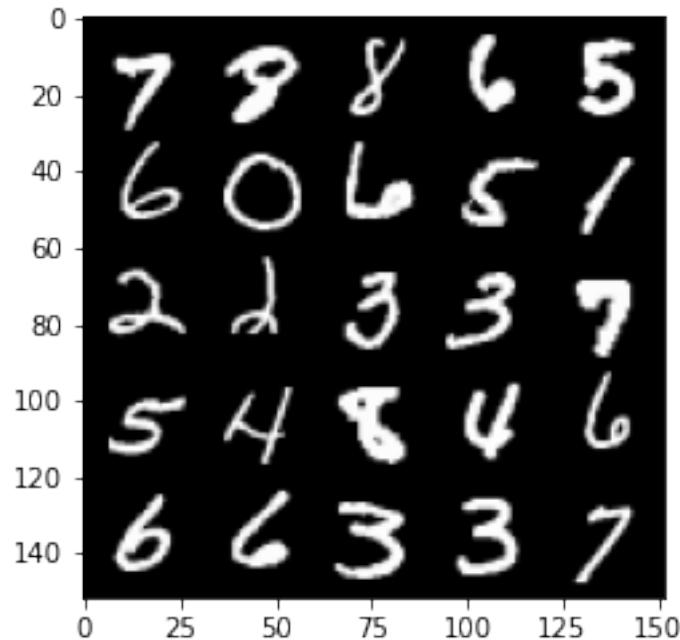
Epoch 63, step 30000 -> generator loss: 0.4340185996294017, discriminator loss: 0.7135044302940362



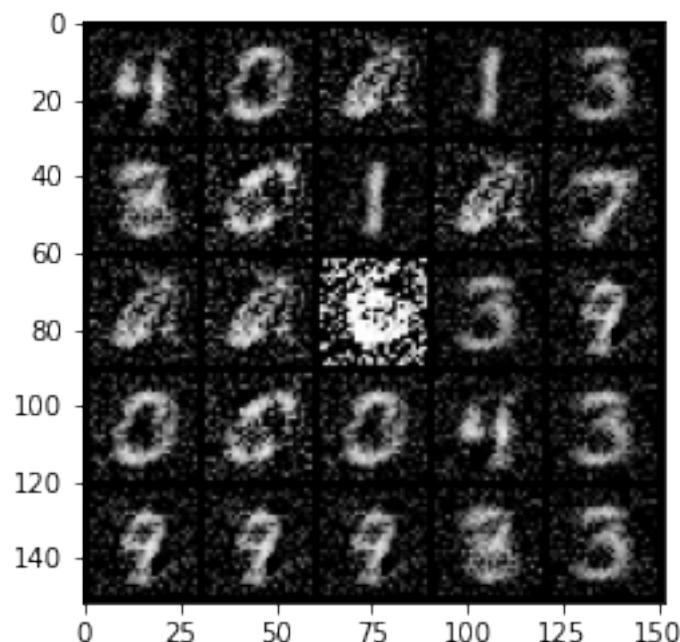
```
100%|   | 469/469 [00:15<00:00, 29.93it/s]
100%|   | 469/469 [00:15<00:00, 29.64it/s]
  3%|   | 13/469 [00:00<00:14, 30.44it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

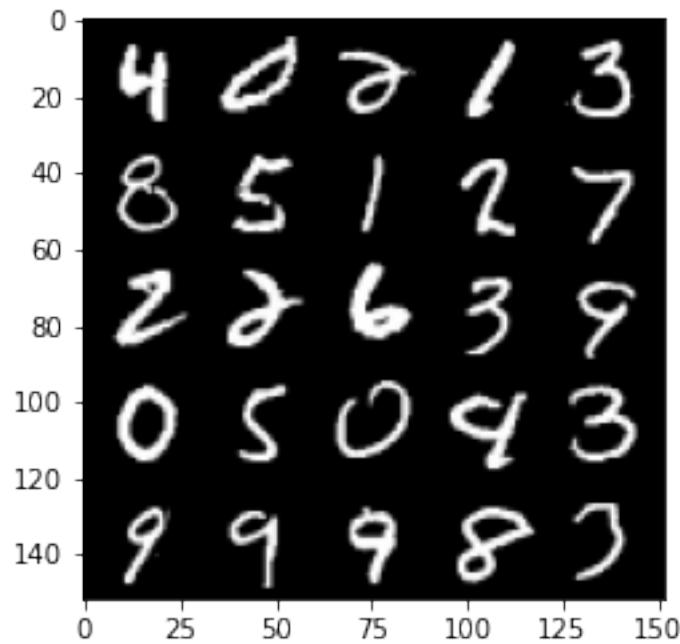
```
Epoch 65, step 30500 -> generator loss: 0.4324429526329042, discriminator loss:
0.7091876066923136
```





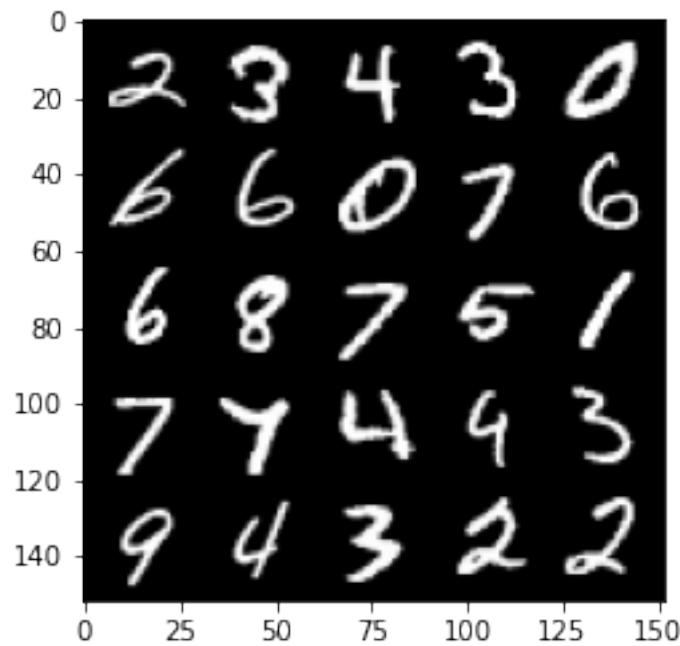
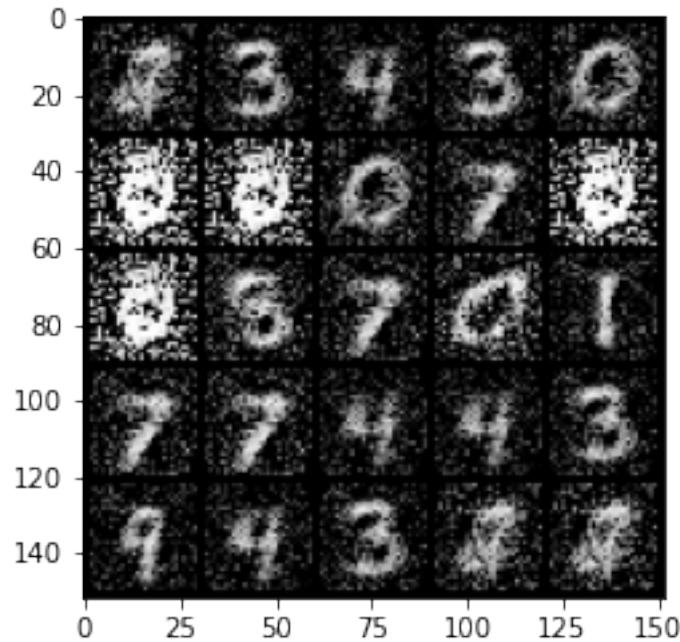
```
100% | 469/469 [00:19<00:00, 24.44it/s]
10% | 46/469 [00:01<00:13, 30.53it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 66, step 31000 -> generator loss: 0.4266739885807037, discriminator loss:
0.7207986929416654
```





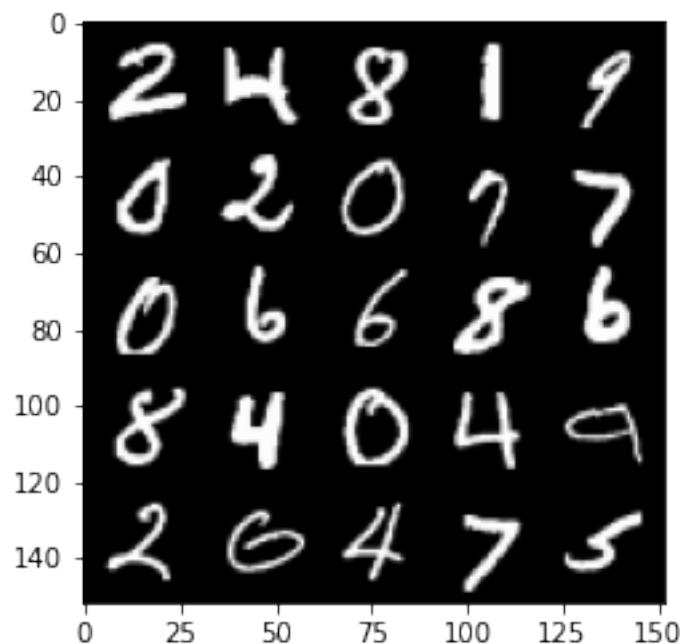
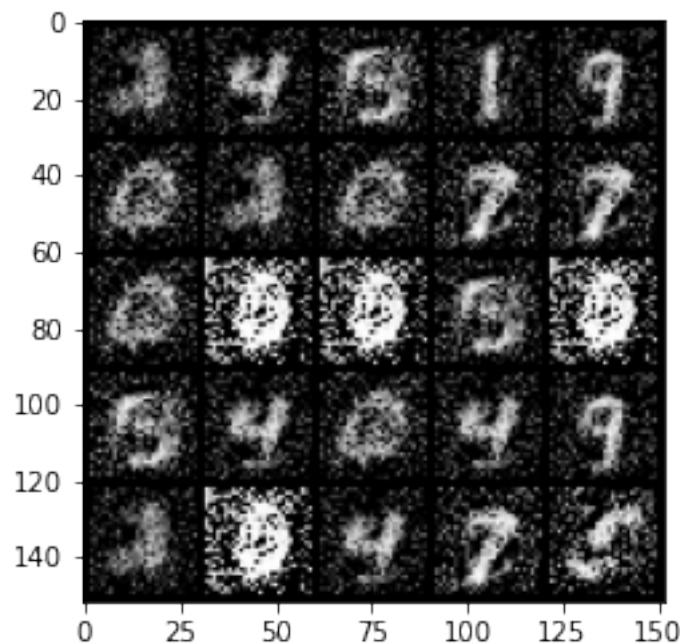
```
100% | 469/469 [00:14<00:00, 32.70it/s]
16% | 77/469 [00:02<00:13, 29.17it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

```
Epoch 67, step 31500 -> generator loss: 0.4334105274677277, discriminator loss:
0.716358083844185
```



```
100%| 469/469 [00:14<00:00, 32.82it/s]
23%| 106/469 [00:03<00:11, 31.05it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

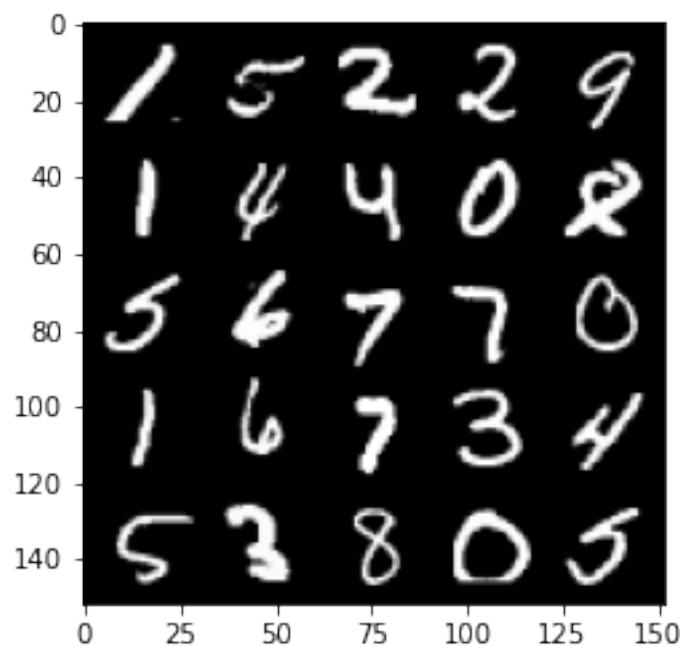
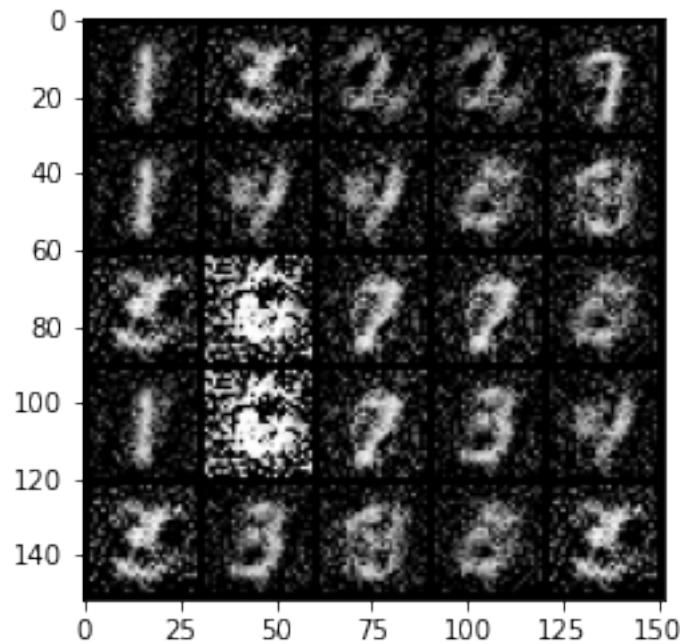
Epoch 68, step 32000 -> generator loss: 0.44009170532226555, discriminator loss: 0.7048211084604258



100% | 469/469 [00:14<00:00, 32.06it/s]

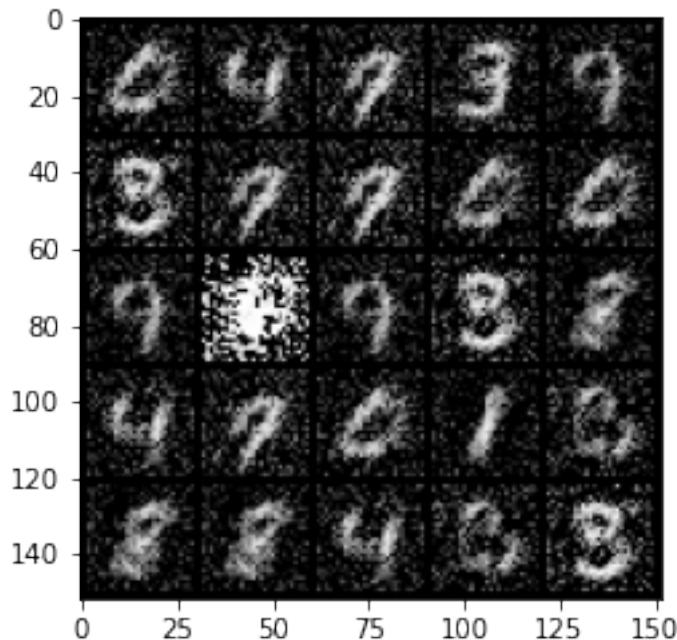
29%| 138/469 [00:03<00:09, 36.58it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

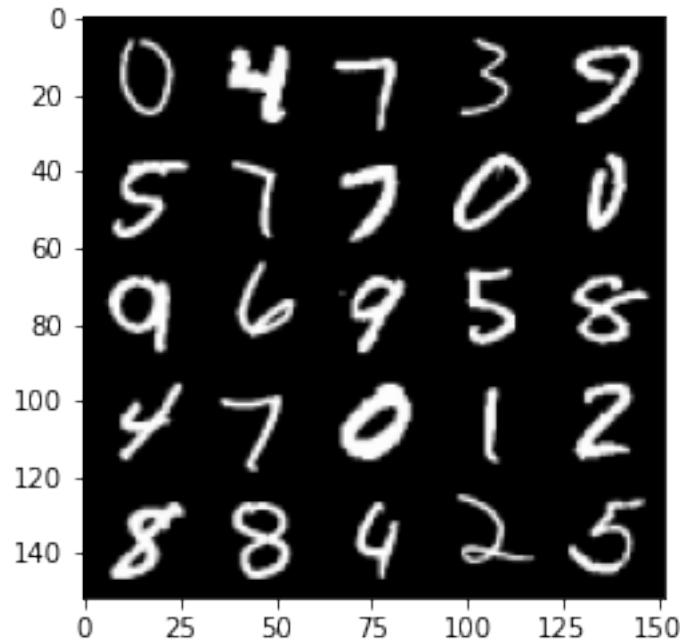
Epoch 69, step 32500 -> generator loss: 0.4343312446475032, discriminator loss: 0.712047560095787



```
100%|      | 469/469 [00:14<00:00, 32.90it/s]
36%|      | 169/469 [00:06<00:10, 28.77it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

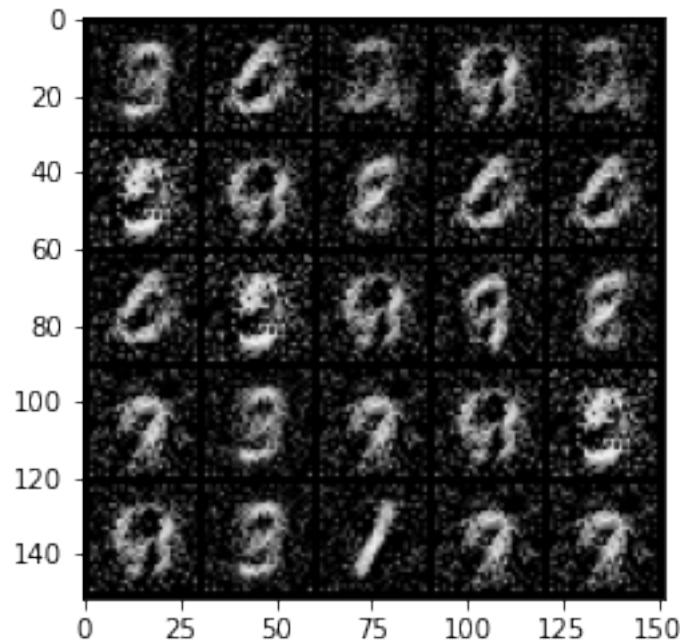
Epoch 70, step 33000 -> generator loss: 0.43112763541936905, discriminator loss:  
0.7192108550071712

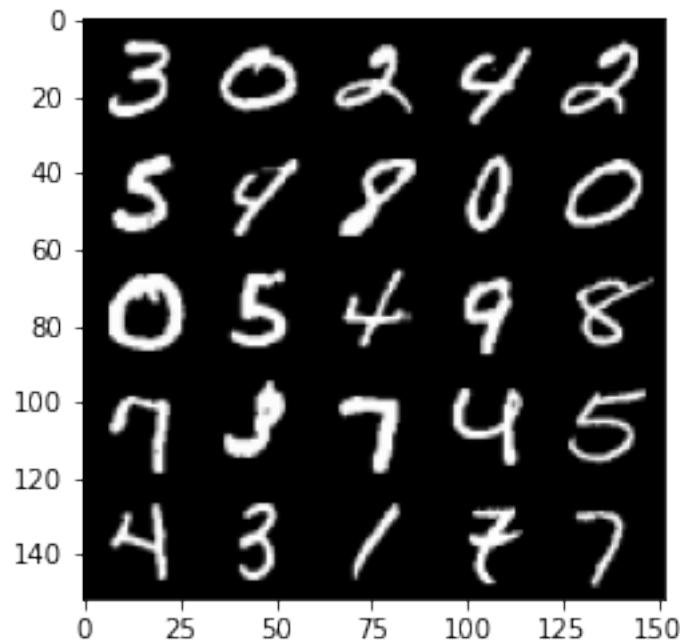




```
100% | 469/469 [00:14<00:00, 31.66it/s]
43% | 200/469 [00:06<00:08, 30.40it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

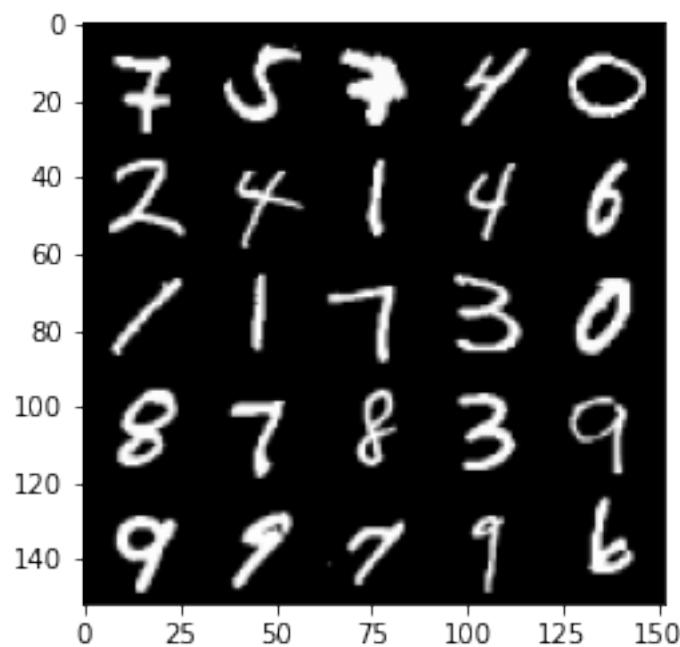
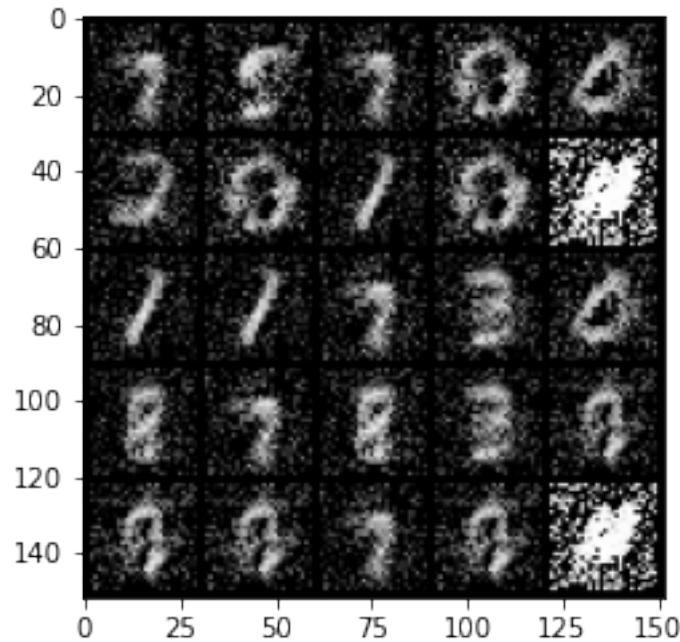
Epoch 71, step 33500 -> generator loss: 0.42732946985960013, discriminator loss: 0.7159662705659868





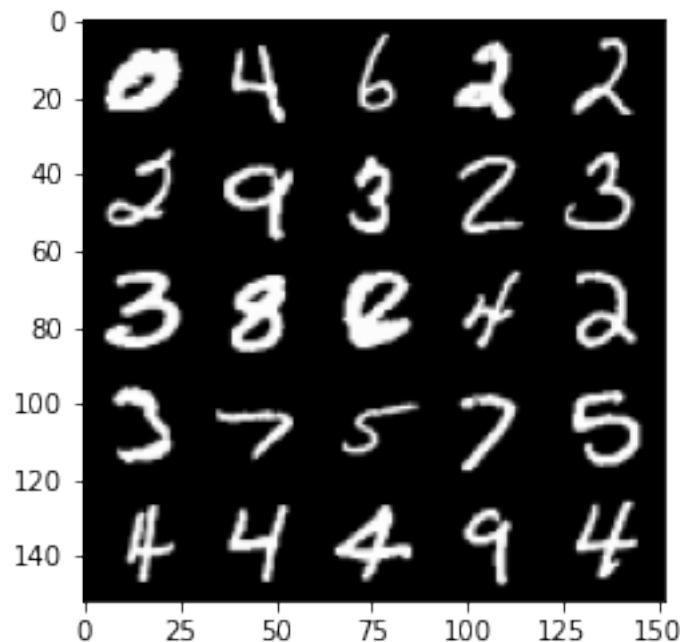
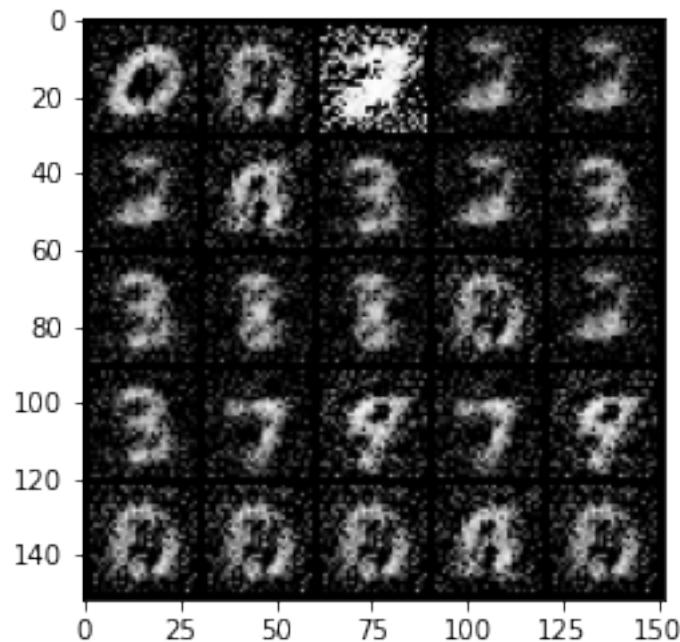
```
100% | 469/469 [00:15<00:00, 30.55it/s]
49% | 231/469 [00:07<00:07, 33.74it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 72, step 34000 -> generator loss: 0.4329000961184501, discriminator loss:
0.7131019110679631
```



```
100%| 469/469 [00:14<00:00, 32.74it/s]
55%| 260/469 [00:07<00:05, 36.77it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

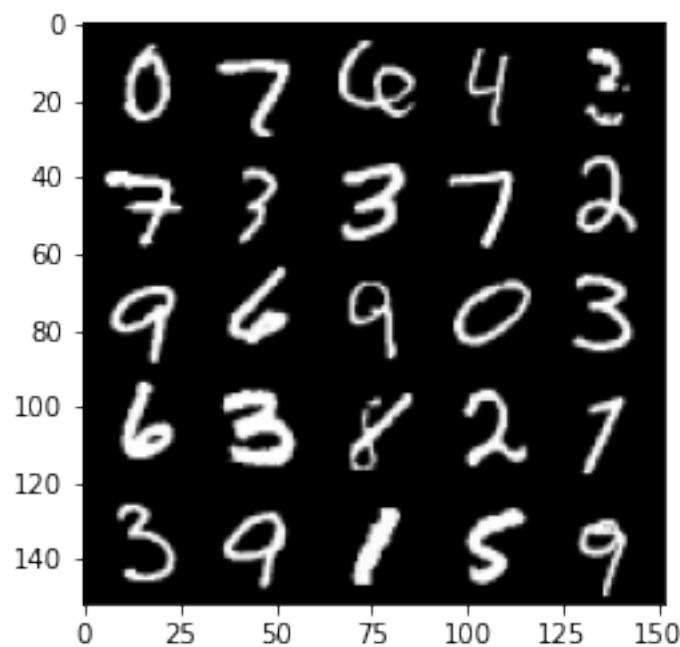
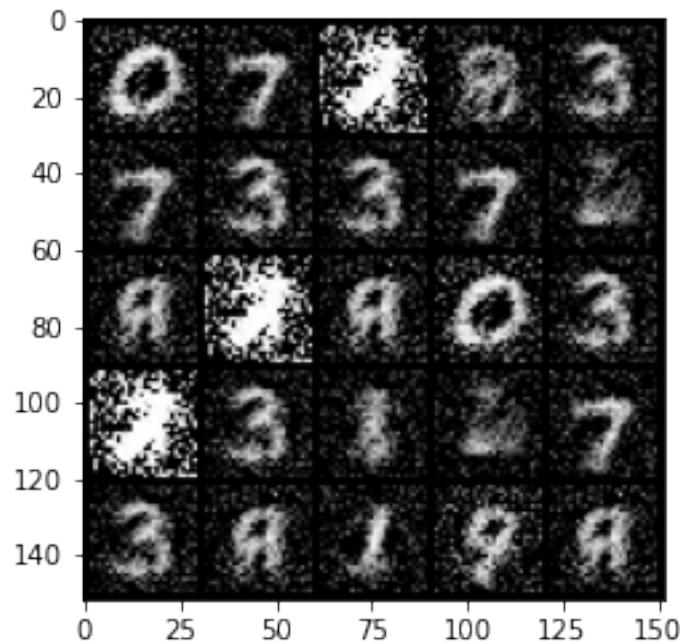
Epoch 73, step 34500 -> generator loss: 0.4330410367250443, discriminator loss: 0.7113350323438644



100% | 469/469 [00:13<00:00, 35.13it/s]

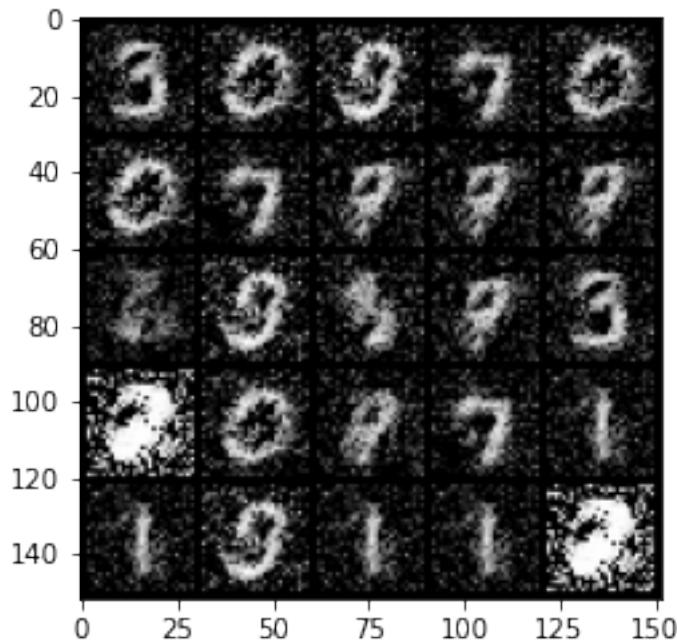
62% | 291/469 [00:08<00:04, 36.38it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

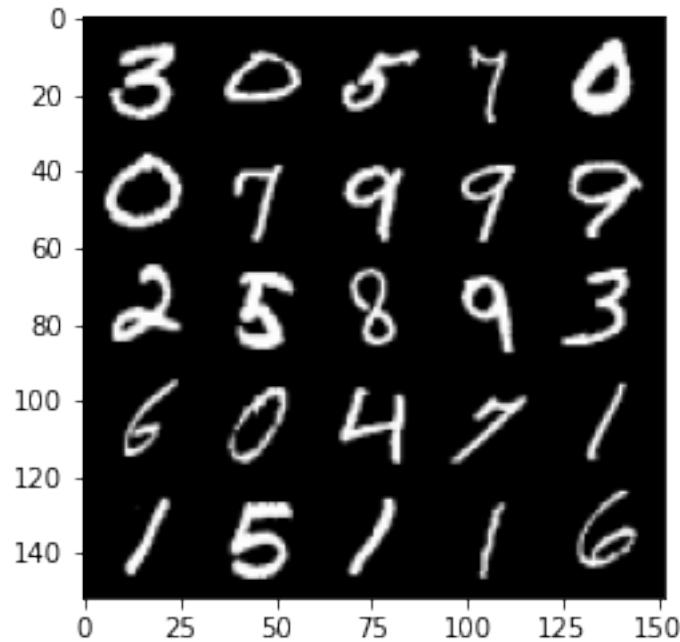
Epoch 74, step 35000 -> generator loss: 0.4408284249305725, discriminator loss: 0.7073948968648909



```
100%|      | 469/469 [00:13<00:00, 35.29it/s]
69%|      | 324/469 [00:08<00:03, 36.62it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 75, step 35500 -> generator loss: 0.43661459928750973, discriminator loss:  
0.7027252624034884





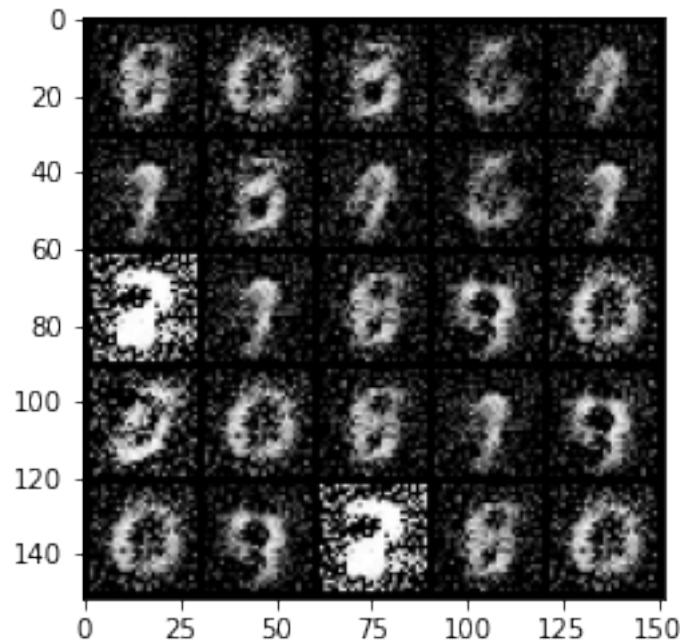
100%|

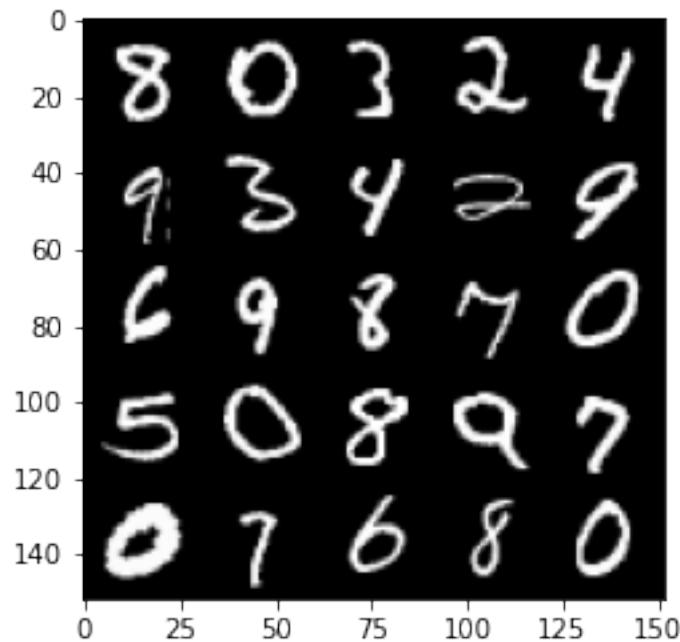
| 469/469 [00:13<00:00, 35.27it/s]

76%|

| 356/469 [00:09<00:03, 36.43it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

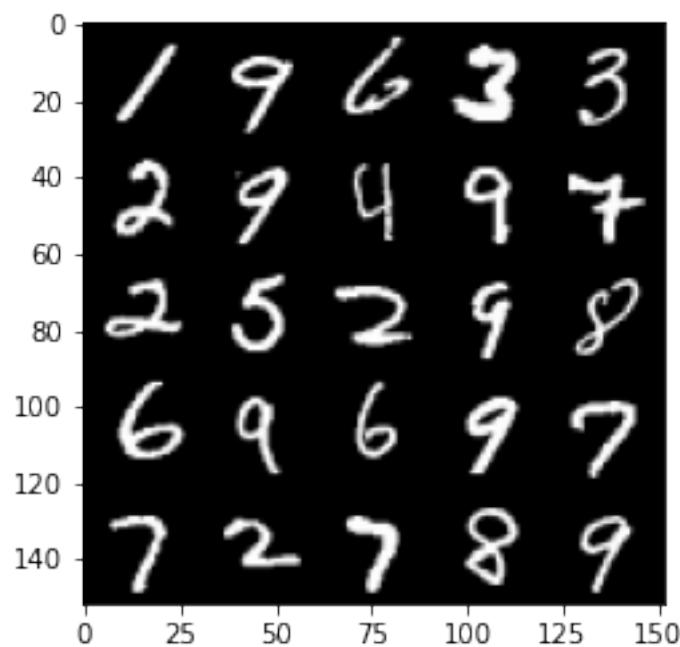
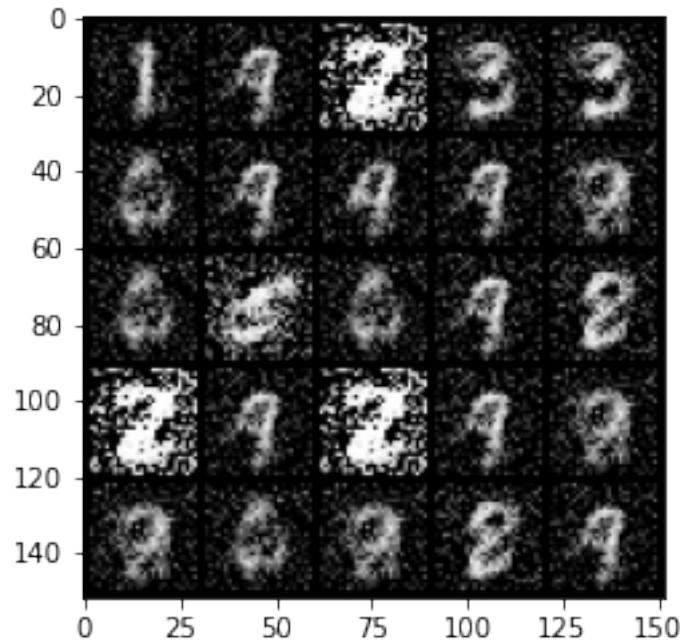
Epoch 76, step 36000 -> generator loss: 0.44174941730499234, discriminator loss: 0.7020864775180813





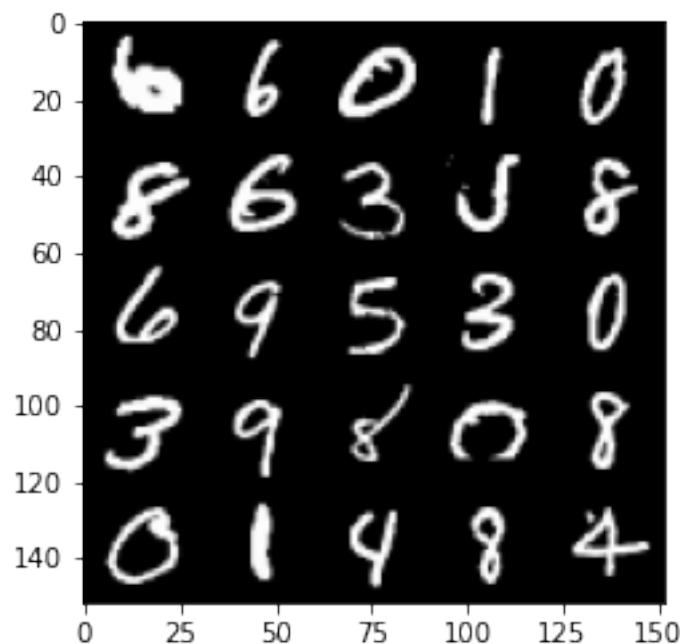
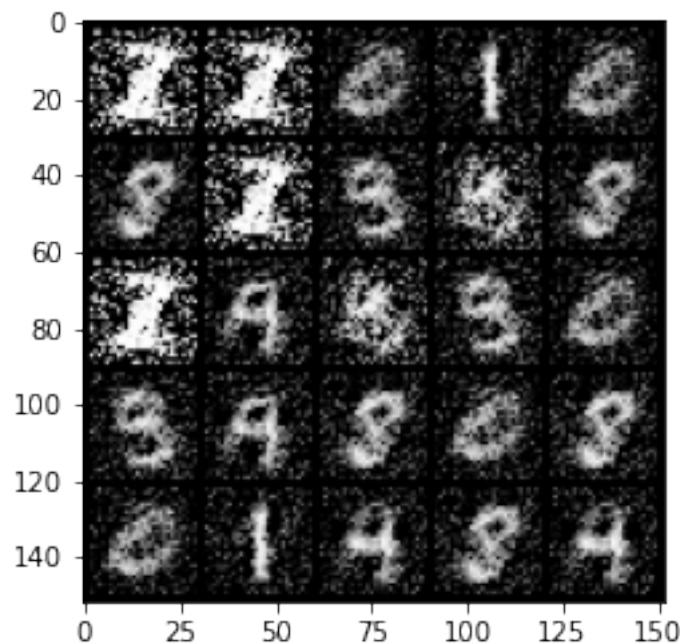
```
100% | 469/469 [00:13<00:00, 35.04it/s]
83% | 387/469 [00:10<00:02, 35.82it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 77, step 36500 -> generator loss: 0.4418022965788839, discriminator loss:
0.6974813345670698
```



```
100%|      | 469/469 [00:13<00:00, 34.90it/s]
89%|      | 417/469 [00:11<00:01, 34.21it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

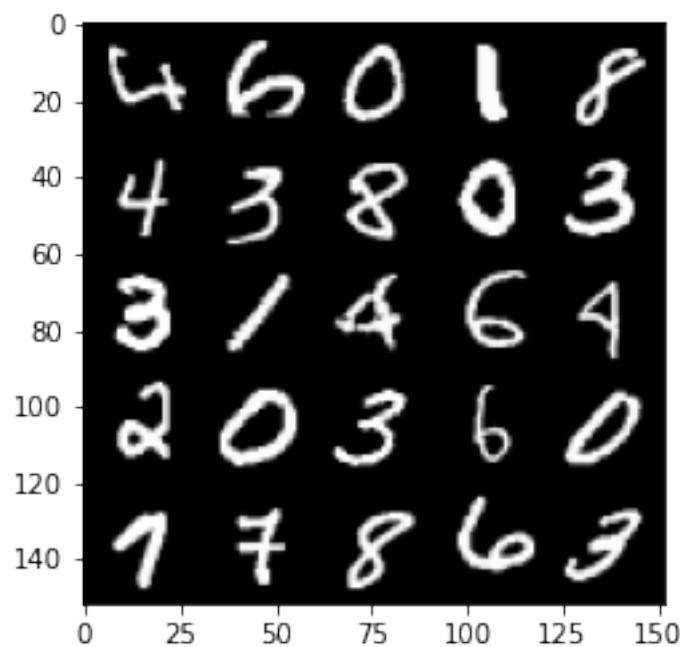
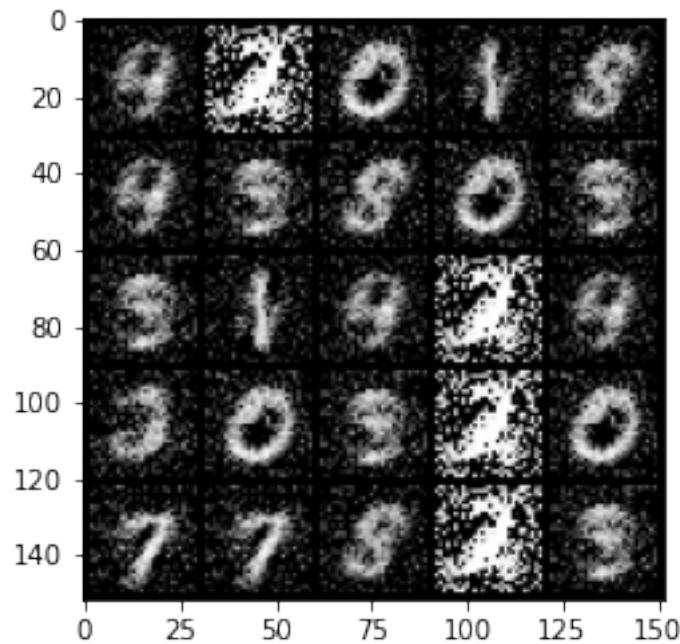
Epoch 78, step 37000 -> generator loss: 0.44560647267103204, discriminator loss: 0.6952159988880151



100% | 469/469 [00:13<00:00, 33.84it/s]

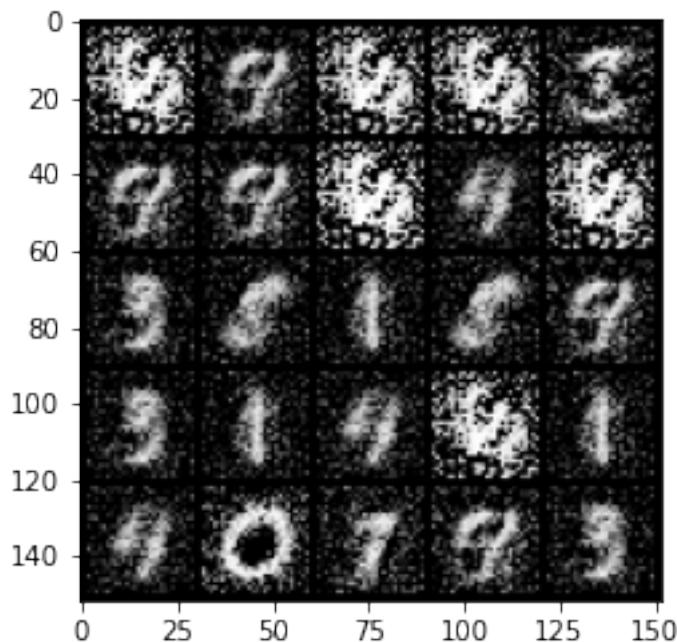
96%| 449/469 [00:14<00:00, 36.41it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

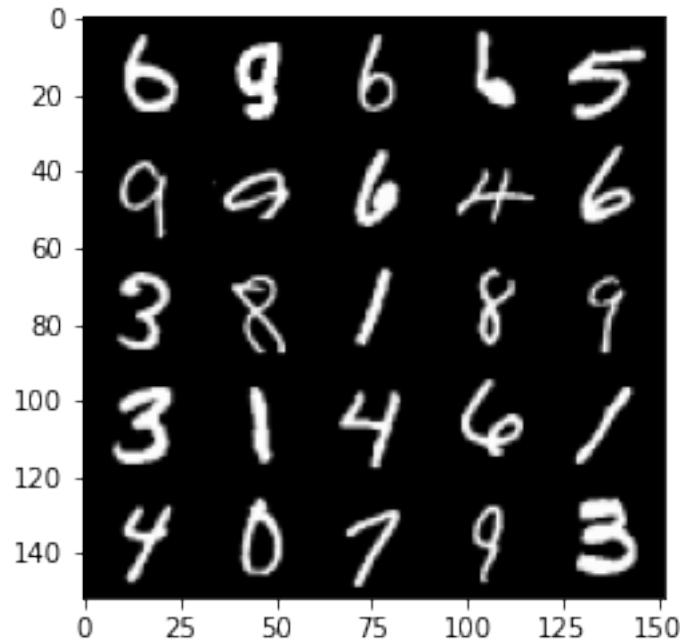
Epoch 79, step 37500 -> generator loss: 0.44394996637105927, discriminator loss: 0.7055424637794502



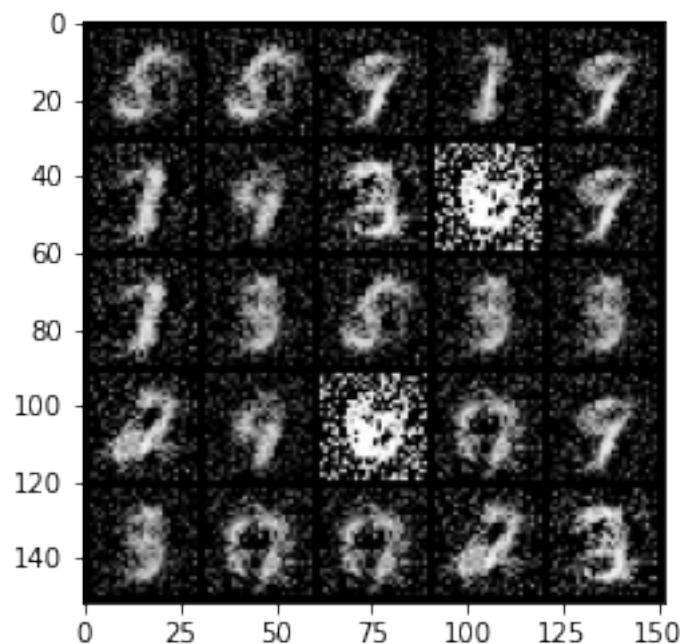
```
100%|   | 469/469 [00:15<00:00, 31.12it/s]
100%|   | 469/469 [00:12<00:00, 36.27it/s]
  2%|   | 11/469 [00:00<00:13, 33.61it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

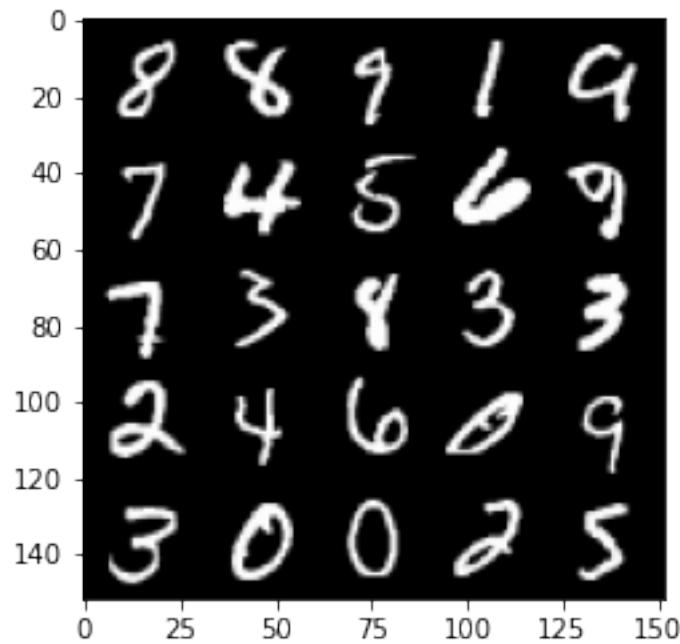
Epoch 81, step 38000 -> generator loss: 0.4448447168469427, discriminator loss: 0.7036392390727993





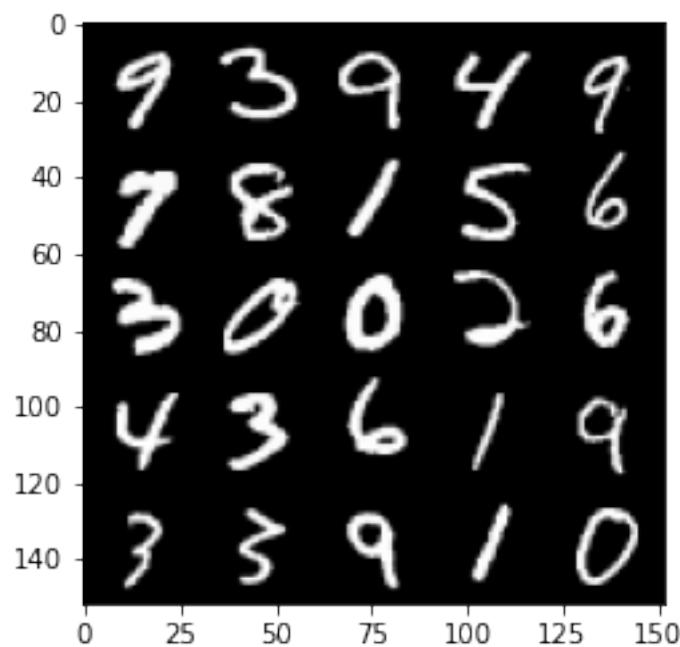
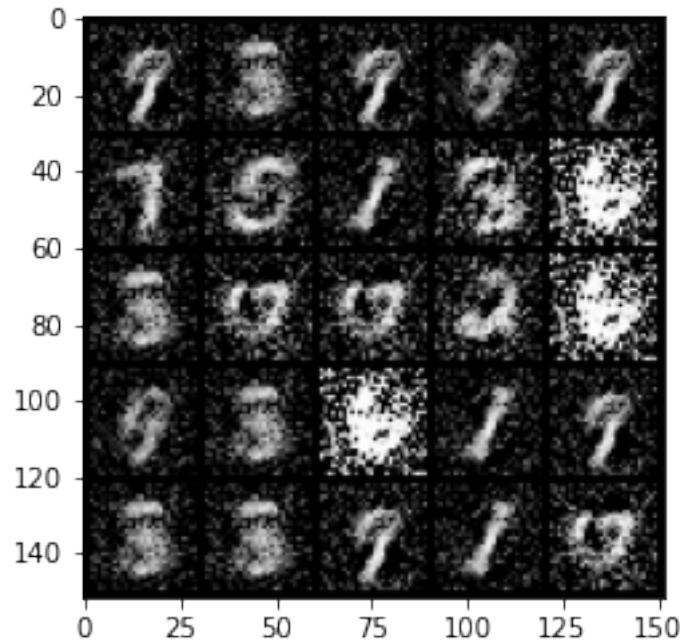
```
100% | 469/469 [00:13<00:00, 35.01it/s]
 8% | 39/469 [00:01<00:11, 36.69it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 82, step 38500 -> generator loss: 0.4407607458233832, discriminator loss:
0.7052141550779342
```





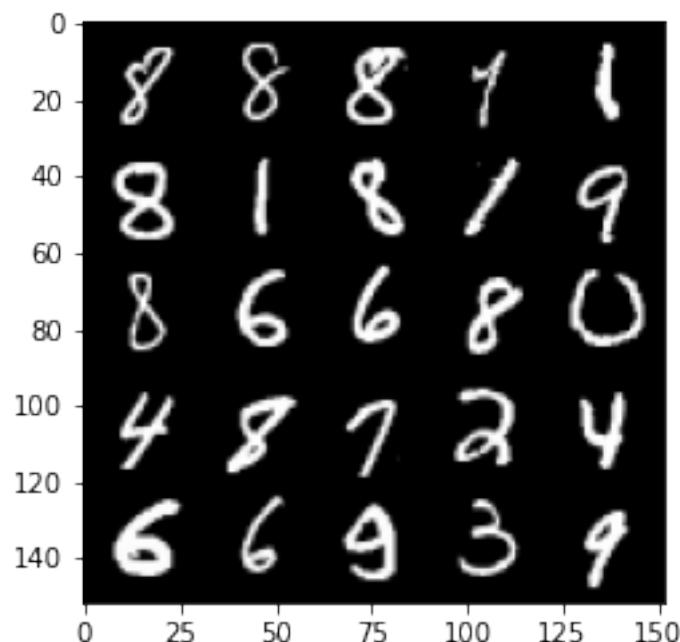
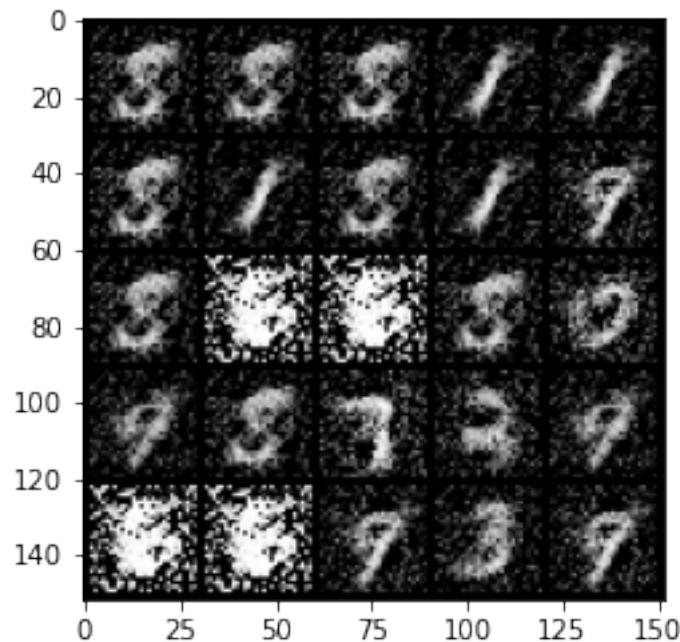
```
100% | 469/469 [00:13<00:00, 35.06it/s]
15% | 72/469 [00:02<00:10, 36.45it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

```
Epoch 83, step 39000 -> generator loss: 0.43628108519315667, discriminator loss:
0.7133231204748154
```



```
100%| 469/469 [00:13<00:00, 35.03it/s]
22%| 104/469 [00:02<00:09, 36.68it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

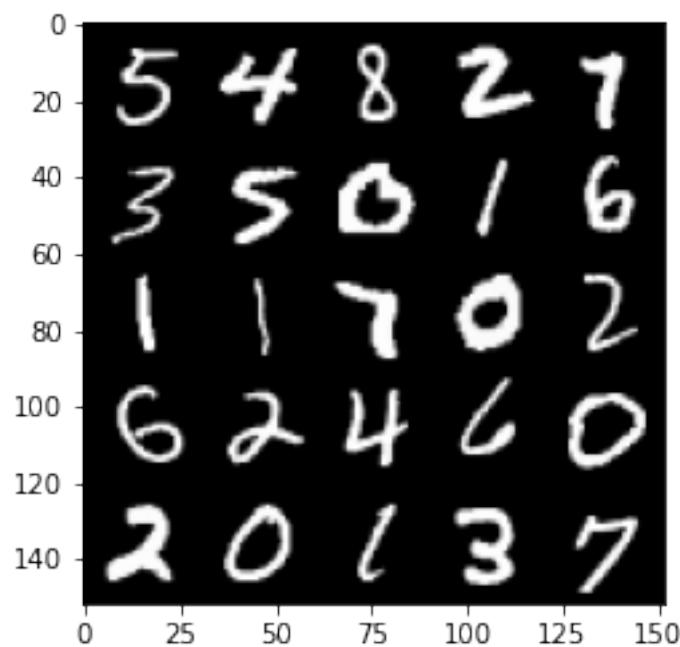
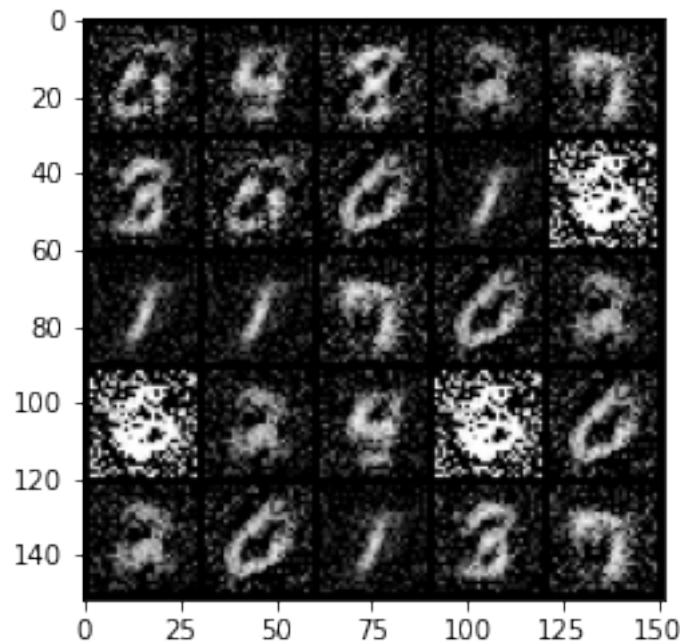
Epoch 84, step 39500 -> generator loss: 0.44089166355133036, discriminator loss: 0.711746658205986



100% | 469/469 [00:13<00:00, 35.14it/s]

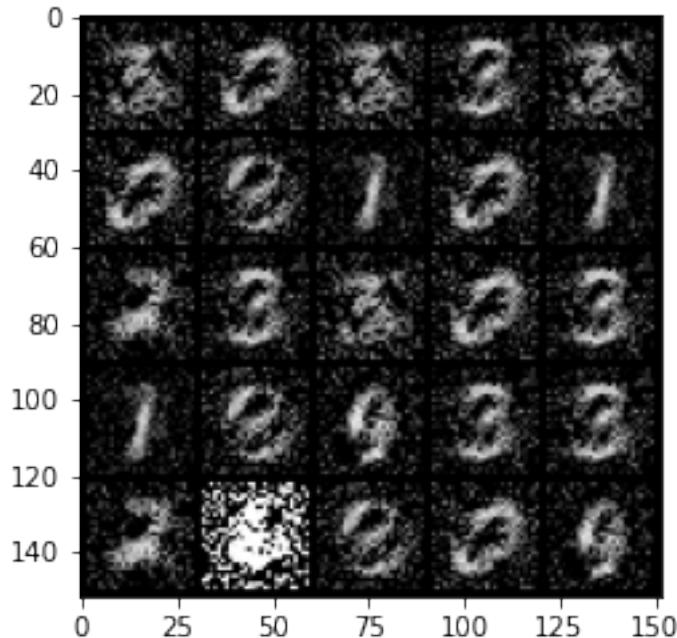
29%| 135/469 [00:03<00:09, 36.44it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

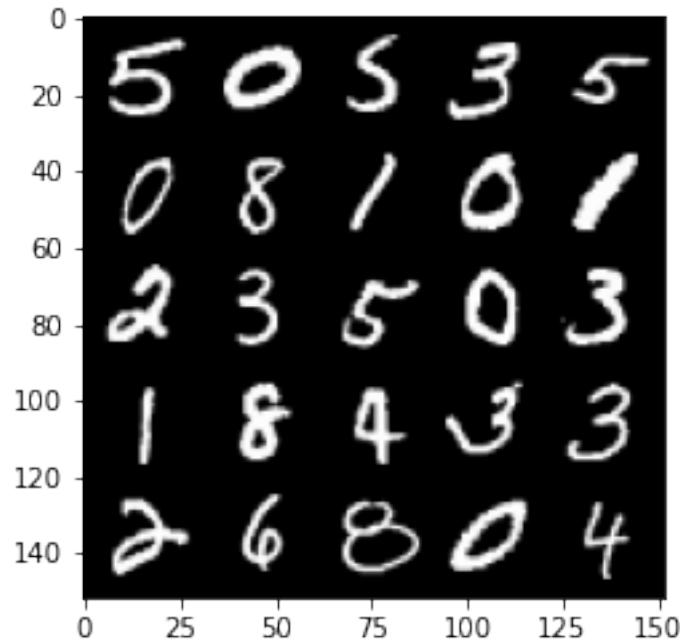
Epoch 85, step 40000 -> generator loss: 0.4405719953179361, discriminator loss: 0.7060838148593904



```
100%|      | 469/469 [00:13<00:00, 35.17it/s]
35%|      | 164/469 [00:04<00:08, 35.12it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

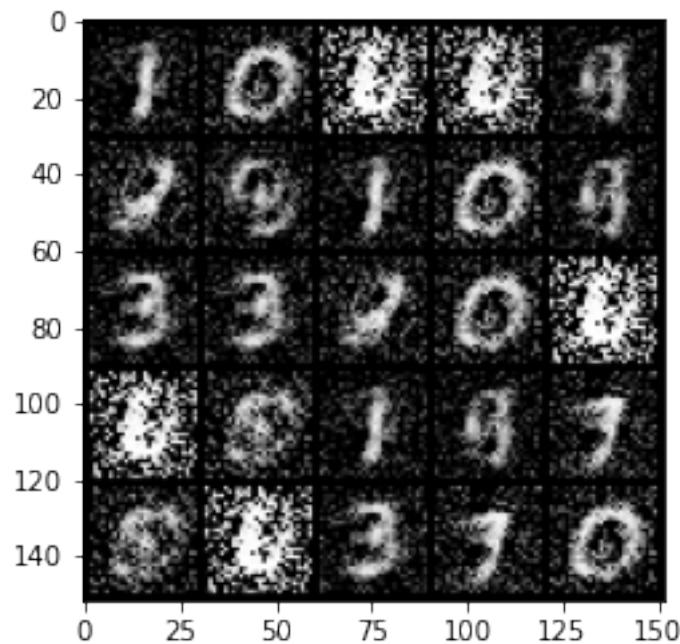
```
Epoch 86, step 40500 -> generator loss: 0.43497716289758664, discriminator loss:
0.7092285794019699
```

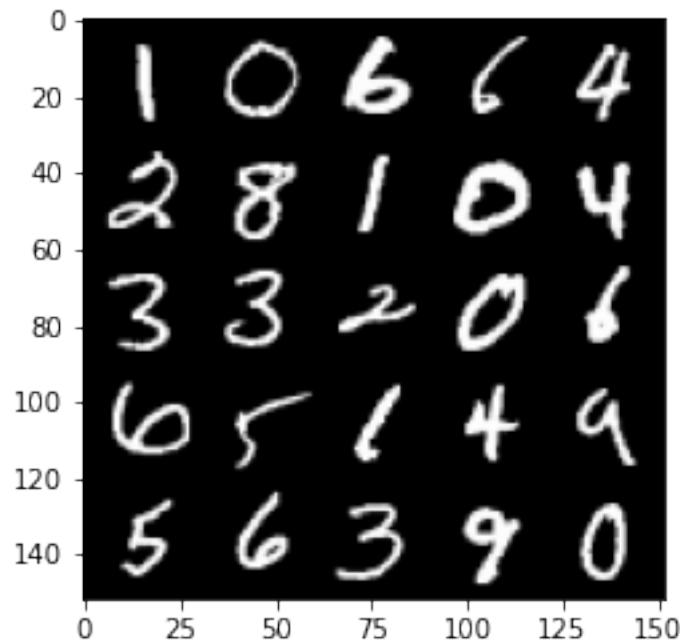




```
100%|      | 469/469 [00:13<00:00, 34.98it/s]
42%|      | 196/469 [00:05<00:07, 36.76it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

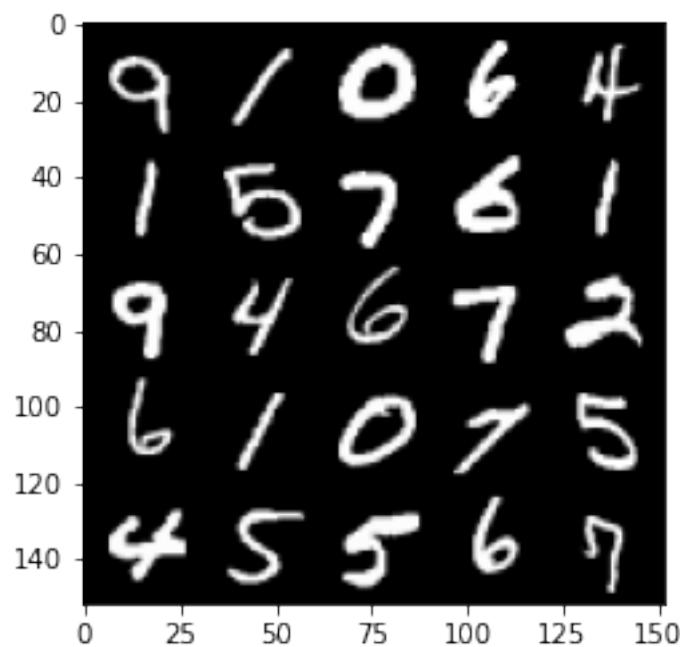
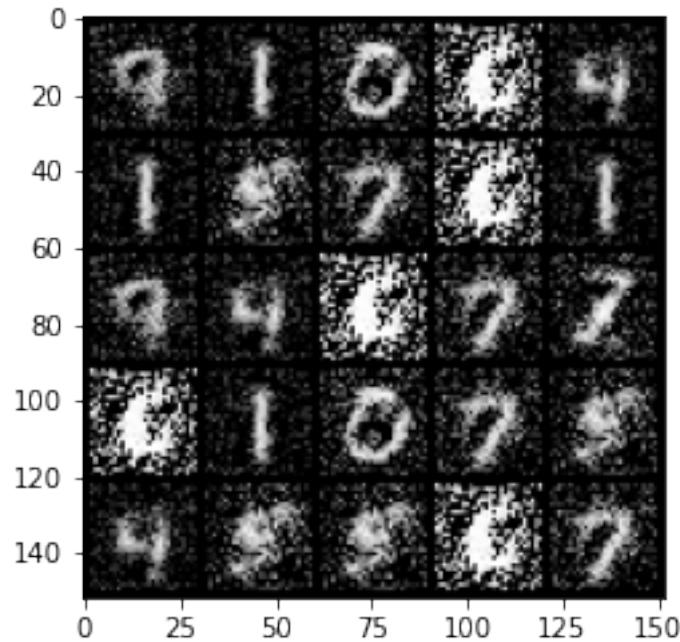
Epoch 87, step 41000 -> generator loss: 0.43524430173635514, discriminator loss: 0.7095795331001283





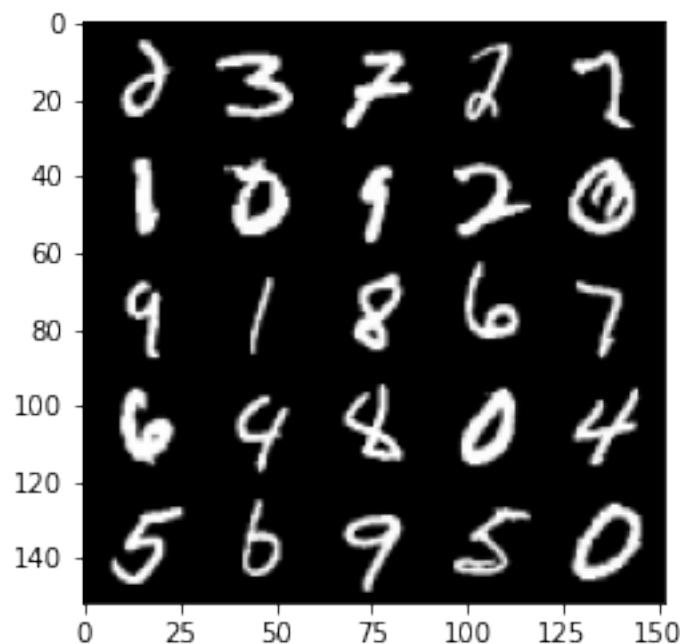
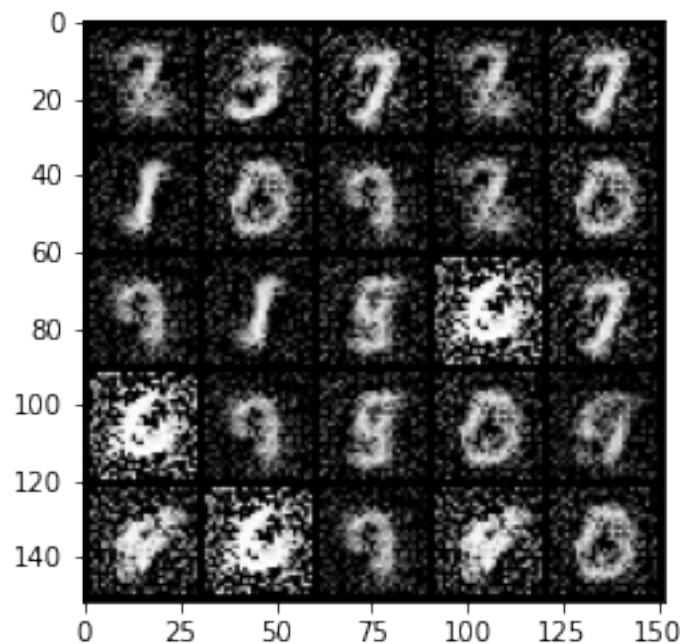
```
100% | 469/469 [00:13<00:00, 35.21it/s]
49% | 228/469 [00:06<00:06, 36.52it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 88, step 41500 -> generator loss: 0.4371719989180566, discriminator loss:
0.707240781664848
```



```
100%|      | 469/469 [00:13<00:00, 35.12it/s]
55%|      | 259/469 [00:07<00:05, 36.26it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

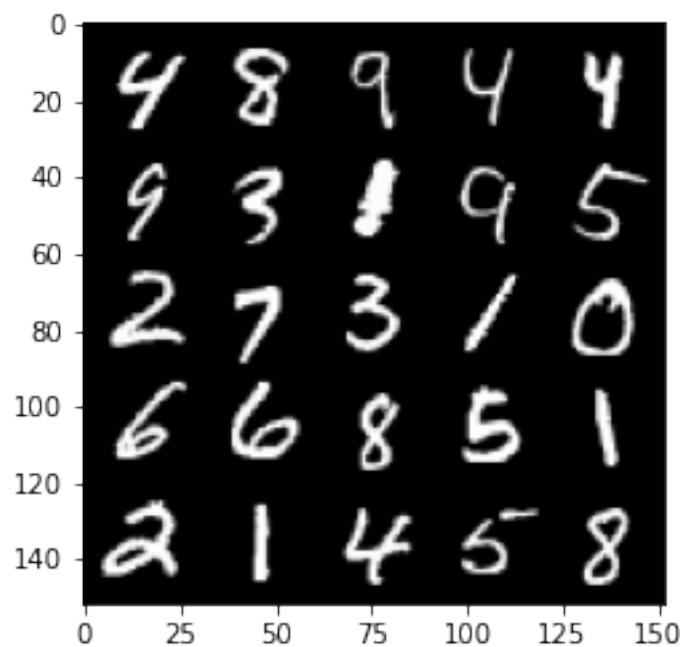
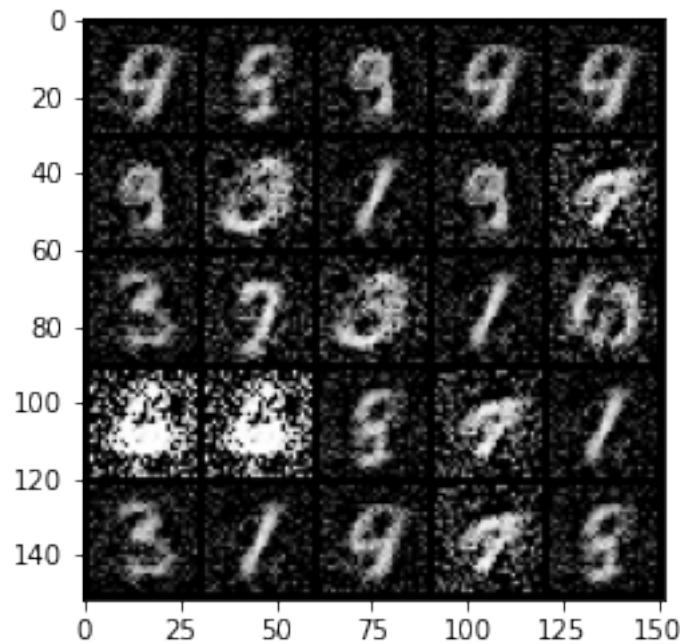
Epoch 89, step 42000 -> generator loss: 0.43832224518060725, discriminator loss: 0.7109516741037357



100% | 469/469 [00:13<00:00, 34.63it/s]

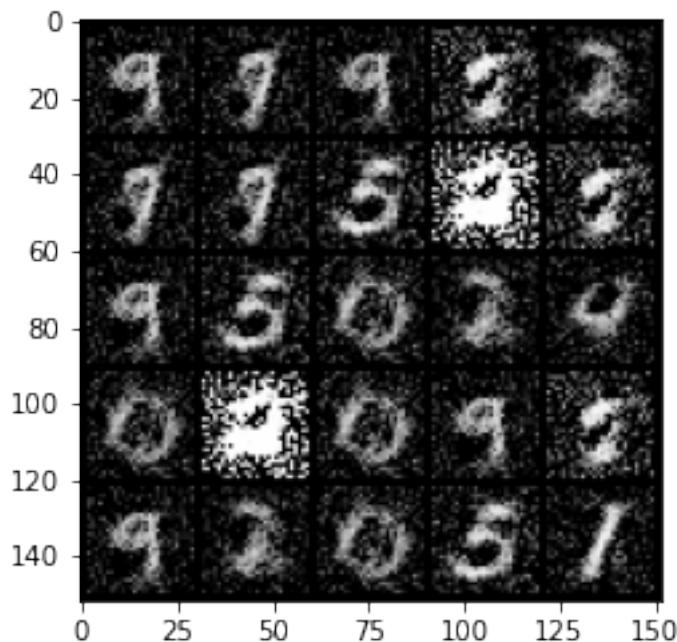
61%| 288/469 [00:07<00:05, 33.80it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

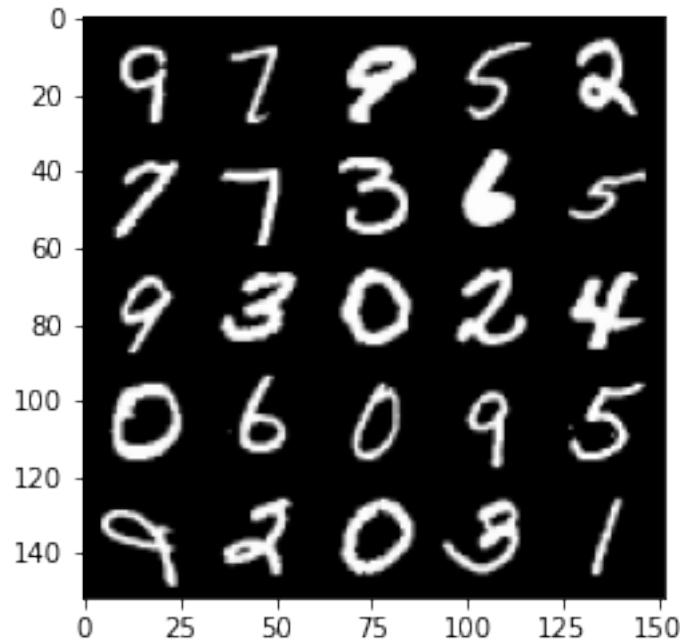
Epoch 90, step 42500 -> generator loss: 0.4324517431259155, discriminator loss: 0.7228305788040164



```
100%|      | 469/469 [00:13<00:00, 35.27it/s]
68%|      | 319/469 [00:08<00:04, 36.90it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 91, step 43000 -> generator loss: 0.44279419481754284, discriminator loss:
0.7025159915685656
```

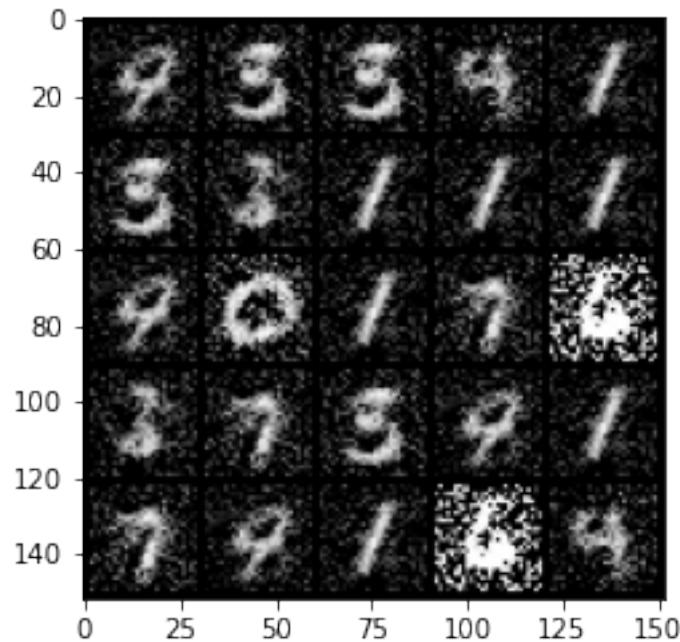


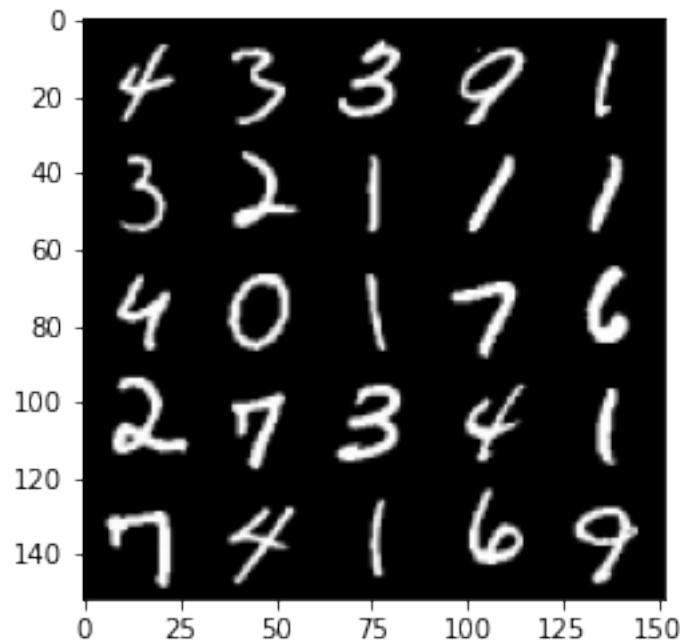


100% | 469/469 [00:13<00:00, 35.29it/s]

75% | 351/469 [00:09<00:03, 36.88it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

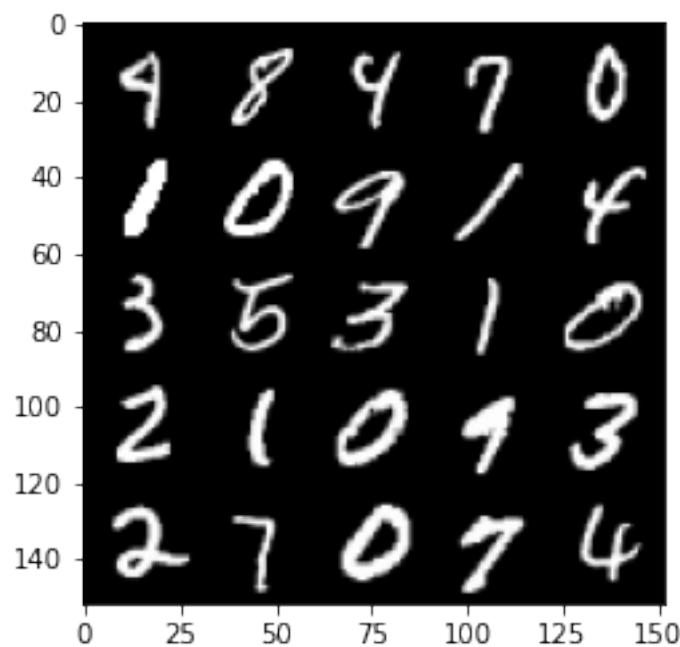
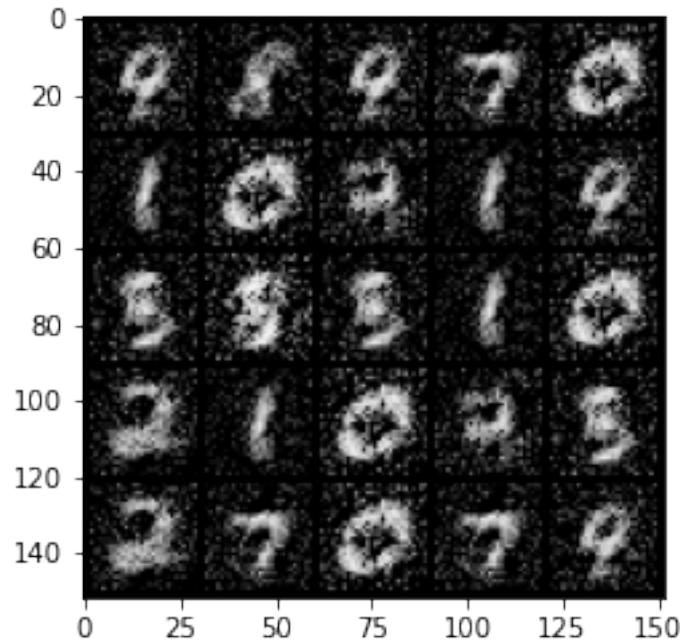
Epoch 92, step 43500 -> generator loss: 0.43807077157497404, discriminator loss: 0.7128626791238778





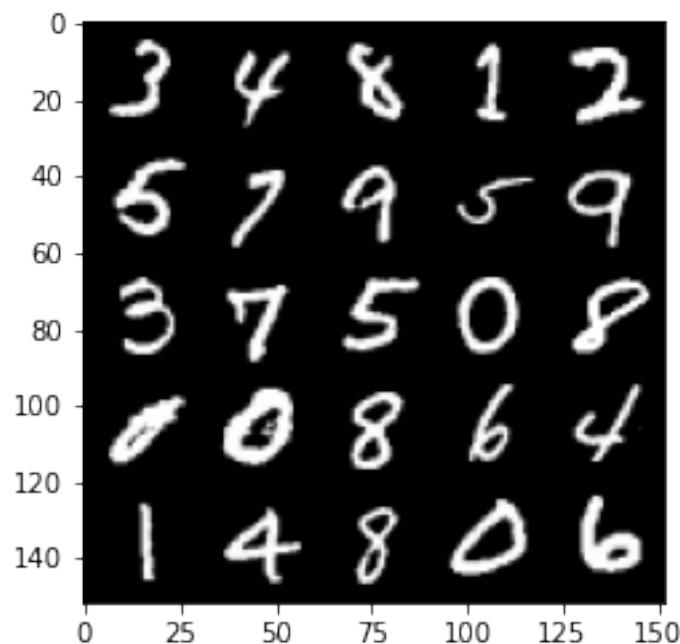
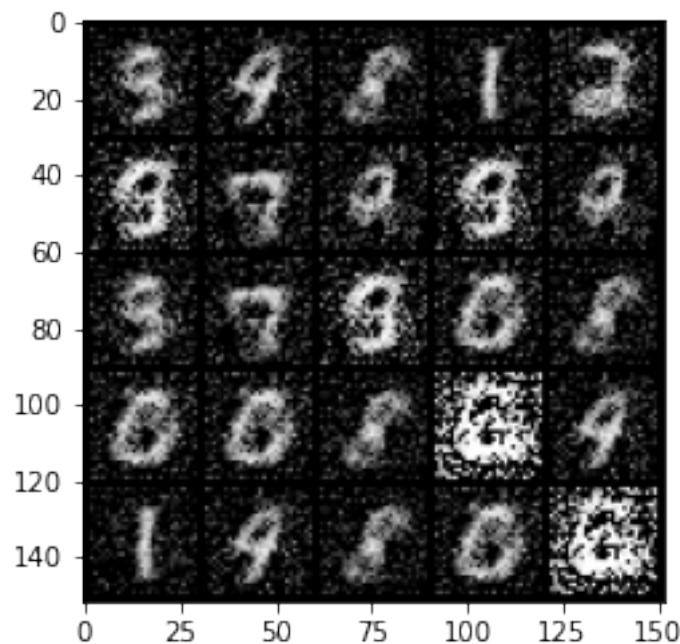
```
100% | 469/469 [00:13<00:00, 35.00it/s]
81% | 380/469 [00:10<00:02, 36.89it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 93, step 44000 -> generator loss: 0.43456452792882955, discriminator loss:
0.72366341996193
```



```
100%|      | 469/469 [00:13<00:00, 35.37it/s]
88%|      | 412/469 [00:11<00:01, 37.04it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

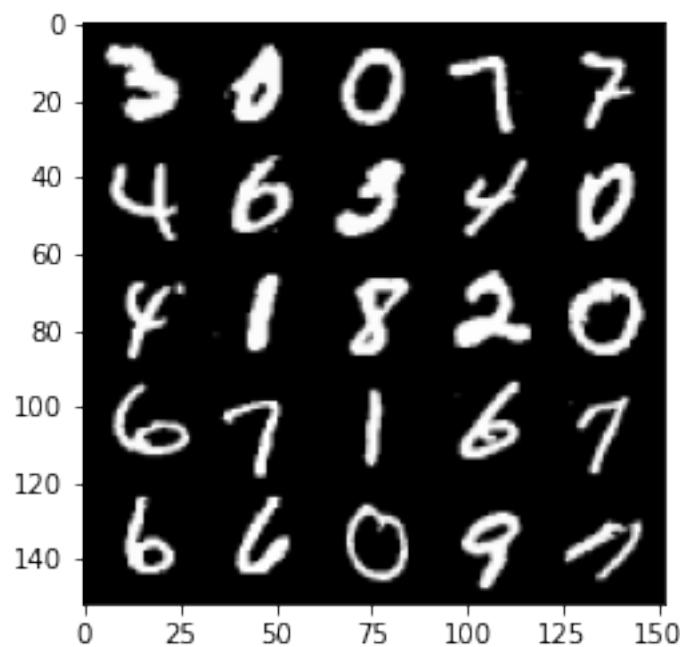
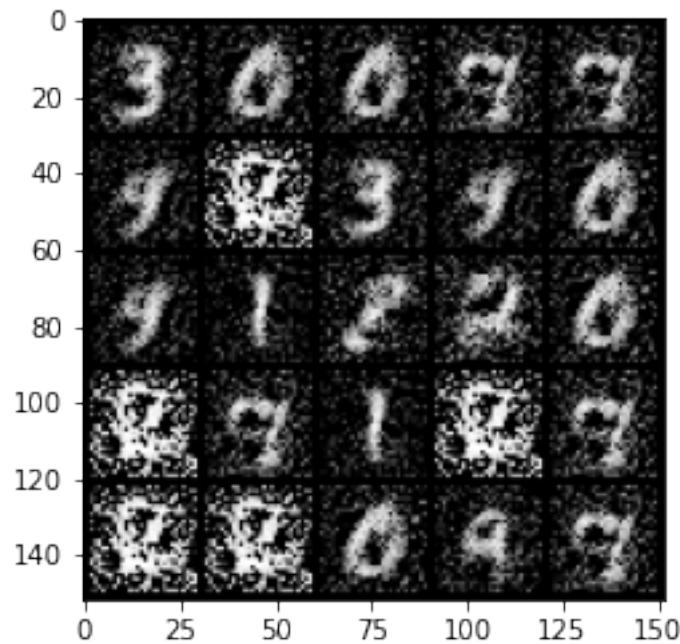
Epoch 94, step 44500 -> generator loss: 0.4241972971558571, discriminator loss: 0.7282421630620959



100% | 469/469 [00:13<00:00, 35.27it/s]

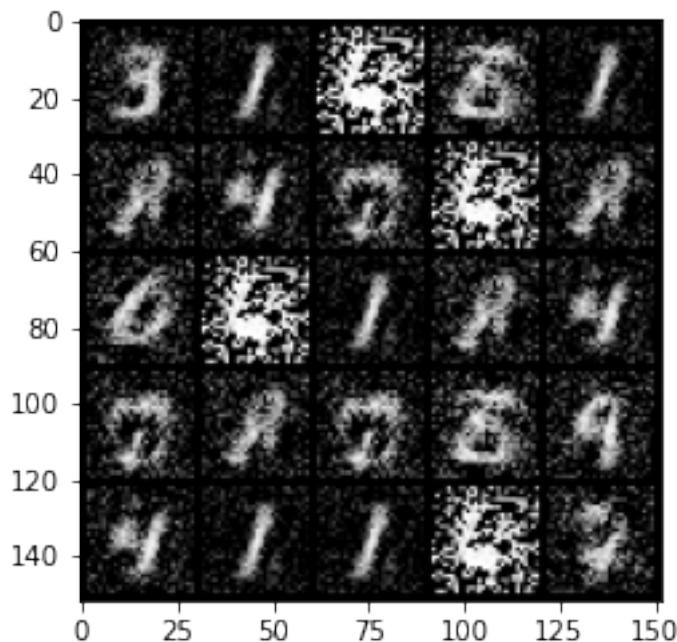
95%| 444/469 [00:12<00:00, 34.91it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

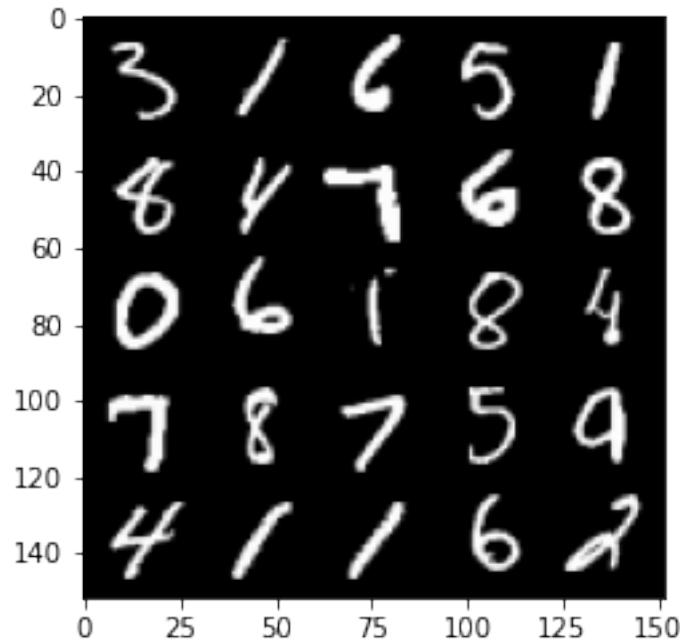
Epoch 95, step 45000 -> generator loss: 0.4390429835915566, discriminator loss: 0.7093175917863839



```
100%|    | 469/469 [00:13<00:00, 34.89it/s]
100%|    | 469/469 [00:12<00:00, 36.23it/s]
  1%|    | 4/469 [00:00<00:15, 30.62it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

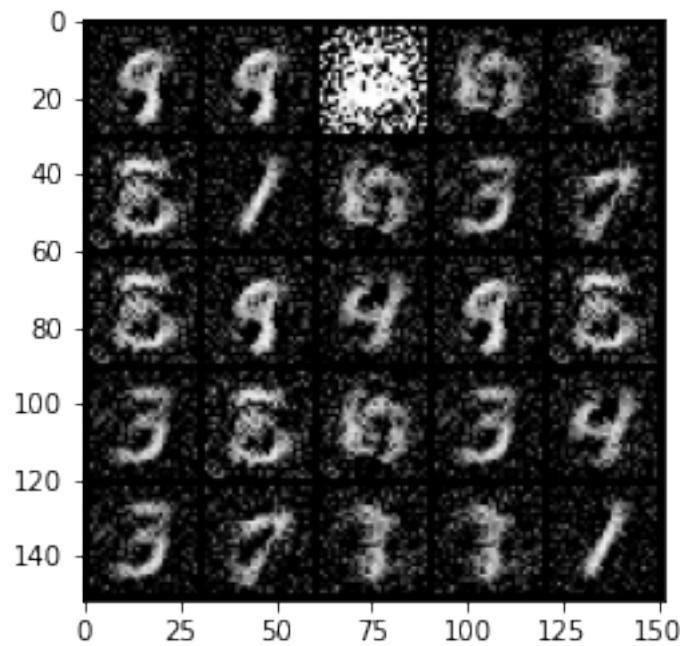
Epoch 97, step 45500 -> generator loss: 0.43923335421085363, discriminator loss: 0.7087546294927604

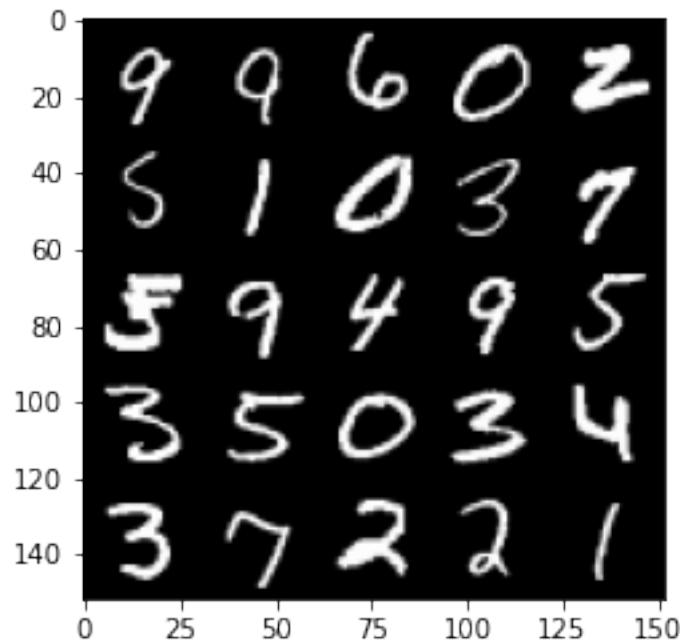




```
100%|      | 469/469 [00:13<00:00, 35.21it/s]
 8%|      | 36/469 [00:01<00:11, 36.31it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

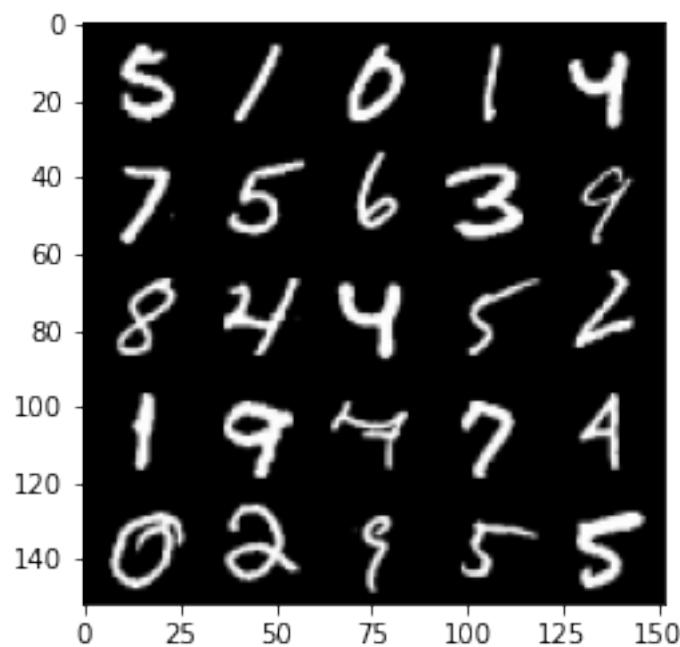
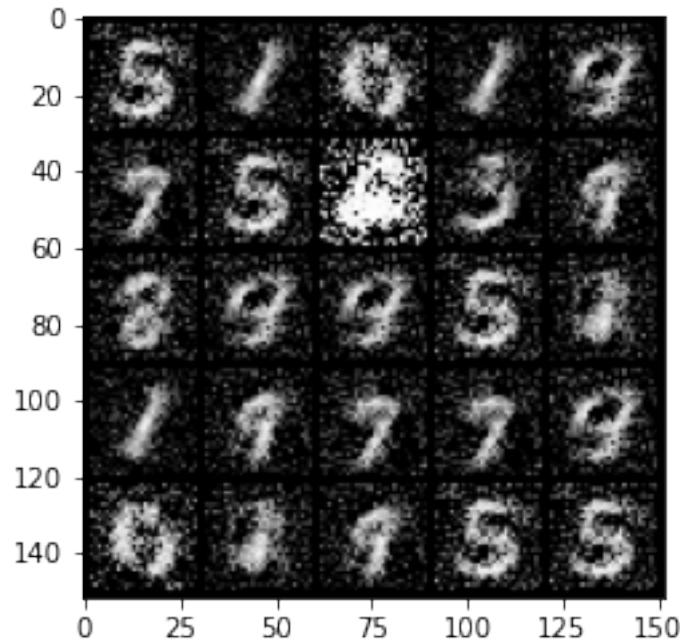
Epoch 98, step 46000 -> generator loss: 0.442243436813354, discriminator loss:
0.7039049087762833
```





```
100%| 469/469 [00:13<00:00, 35.30it/s]
14%| 67/469 [00:01<00:10, 36.70it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

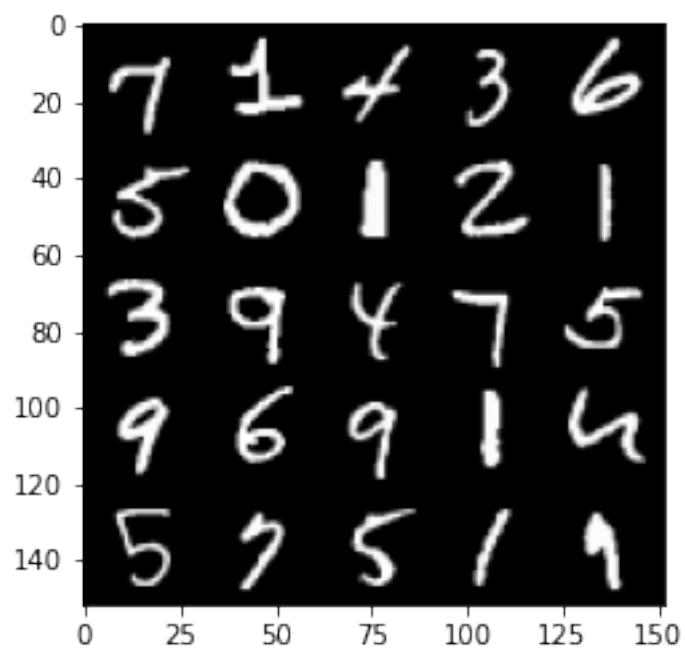
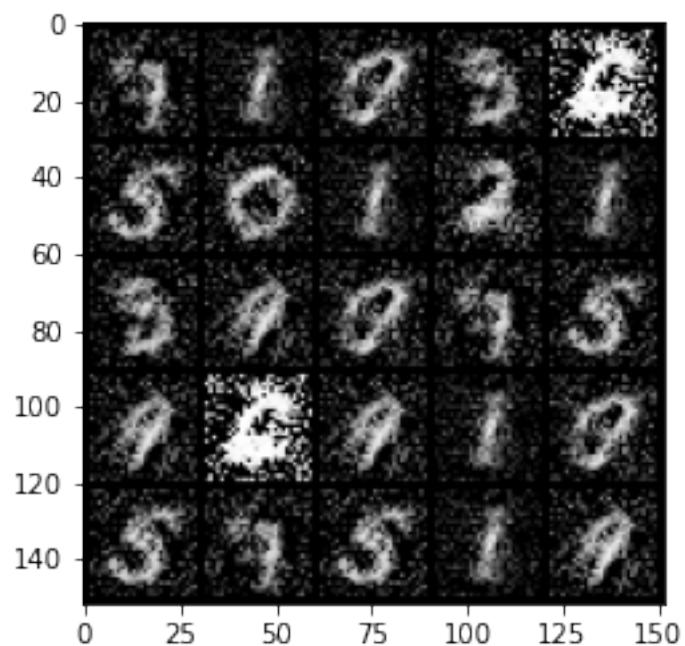
```
Epoch 99, step 46500 -> generator loss: 0.4446401296257975, discriminator loss:
0.700733257174492
```



```
100%| 469/469 [00:13<00:00, 35.10it/s]
21%| 99/469 [00:02<00:10, 34.96it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 100, step 47000 -> generator loss: 0.44166250360012066, discriminator

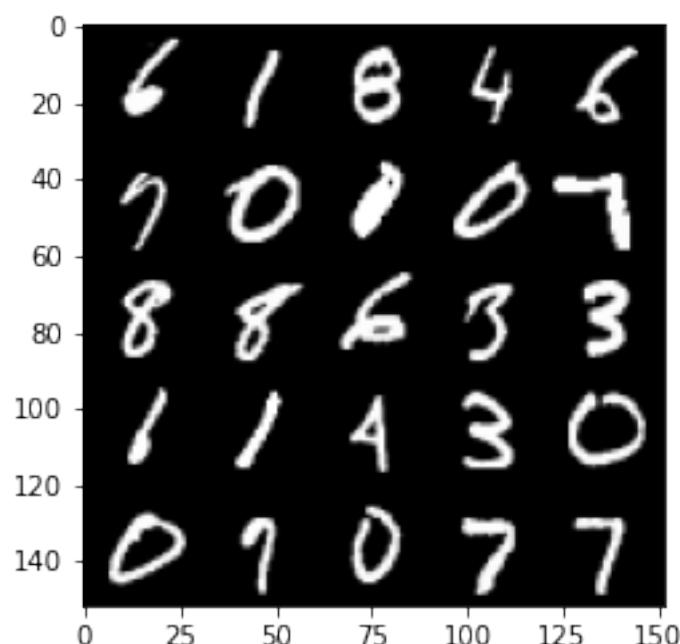
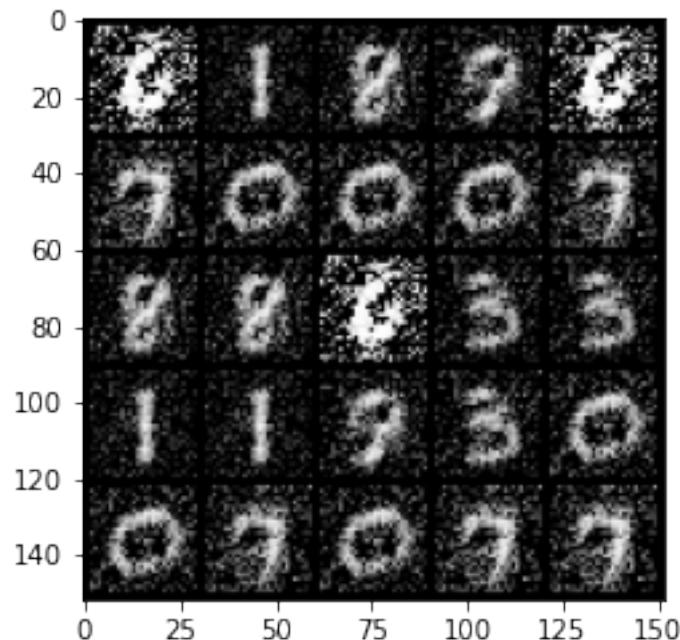
loss: 0.7051707335710516



100% | 469/469 [00:13<00:00, 34.96it/s]  
28% | 130/469 [00:03<00:09, 36.05it/s] Clipping input data to the

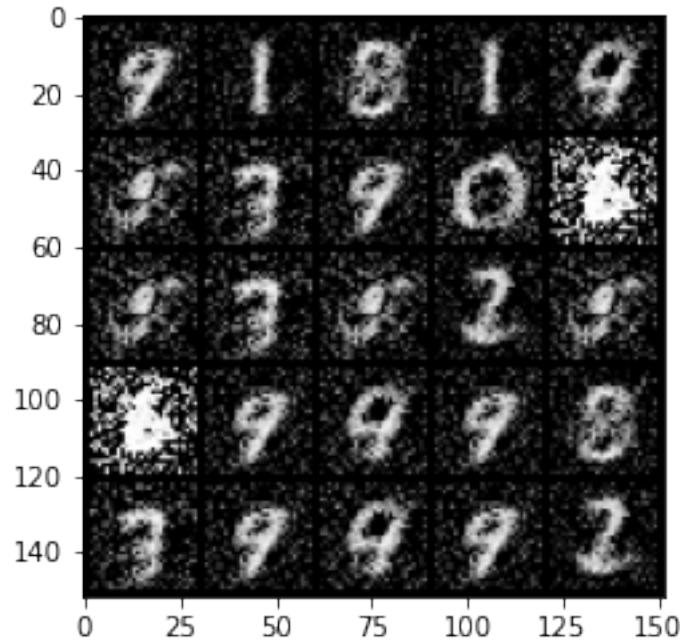
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

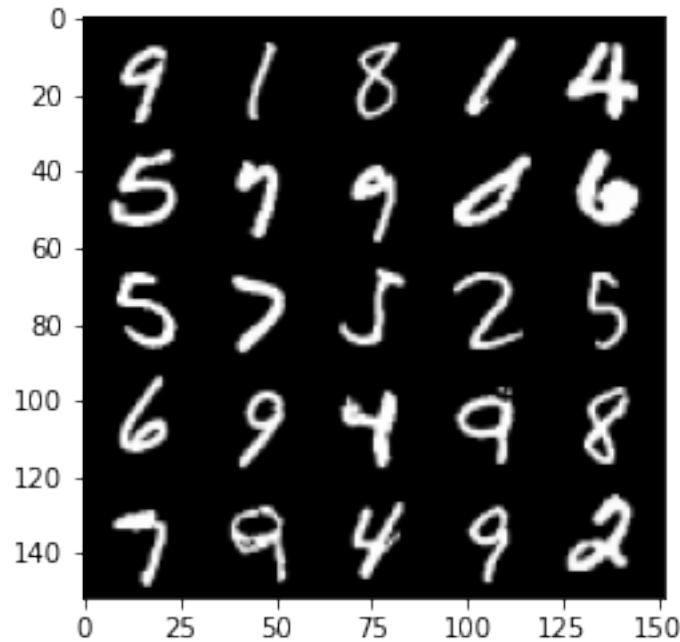
Epoch 101, step 47500 -> generator loss: 0.43438610458374055, discriminator loss: 0.7143153171539303



```
100%|      | 469/469 [00:13<00:00, 34.92it/s]
34%|      | 160/469 [00:04<00:08, 36.89it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

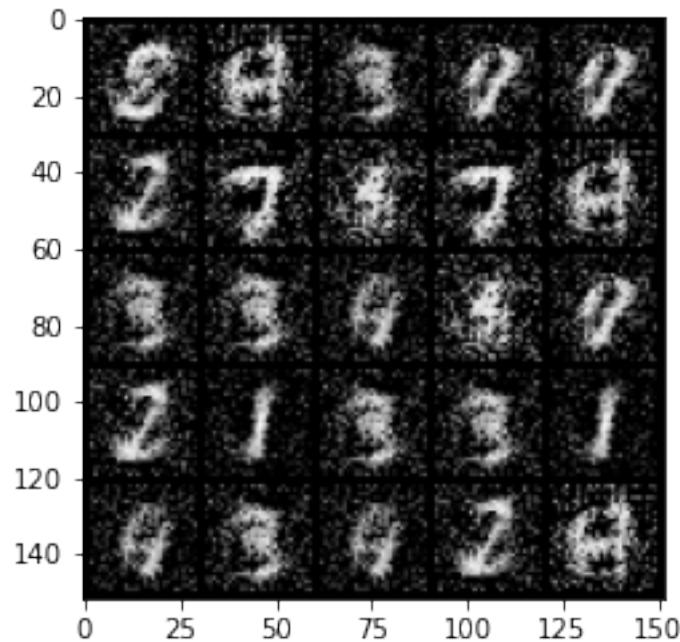
Epoch 102, step 48000 -> generator loss: 0.44139248615503285, discriminator  
loss: 0.7084329987764351

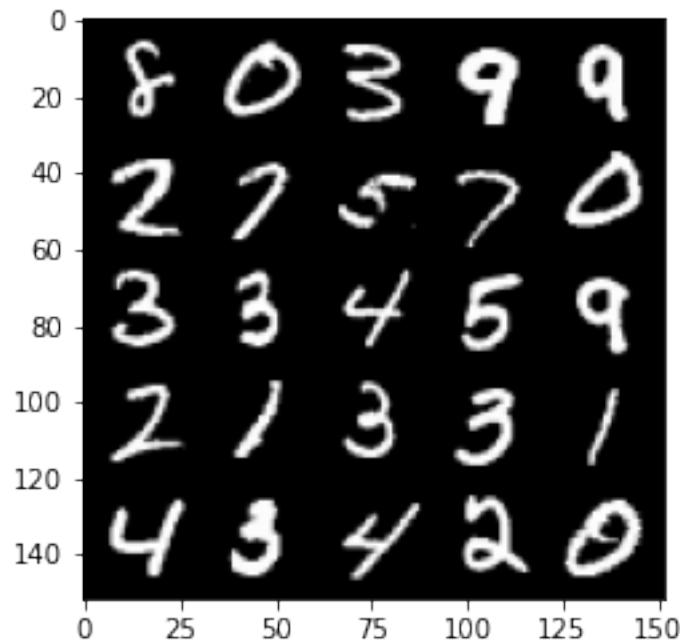




```
100%|      | 469/469 [00:13<00:00, 35.27it/s]
41%|      | 192/469 [00:05<00:07, 36.45it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

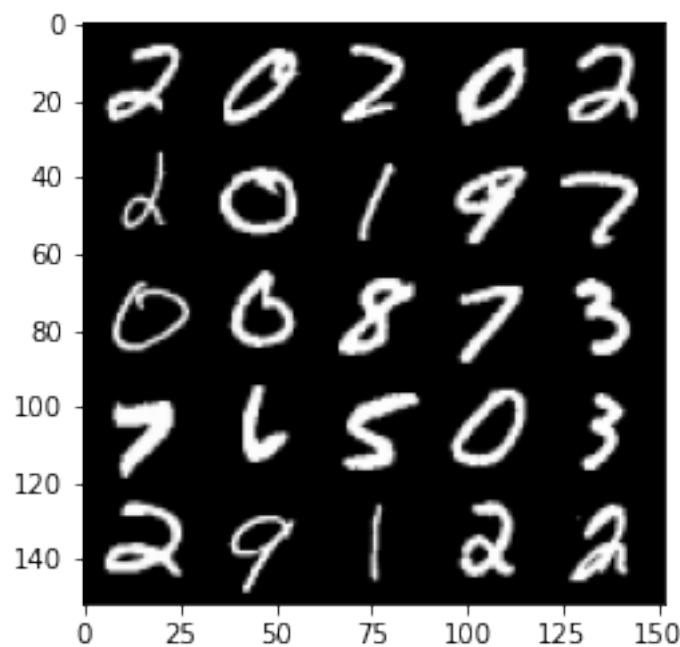
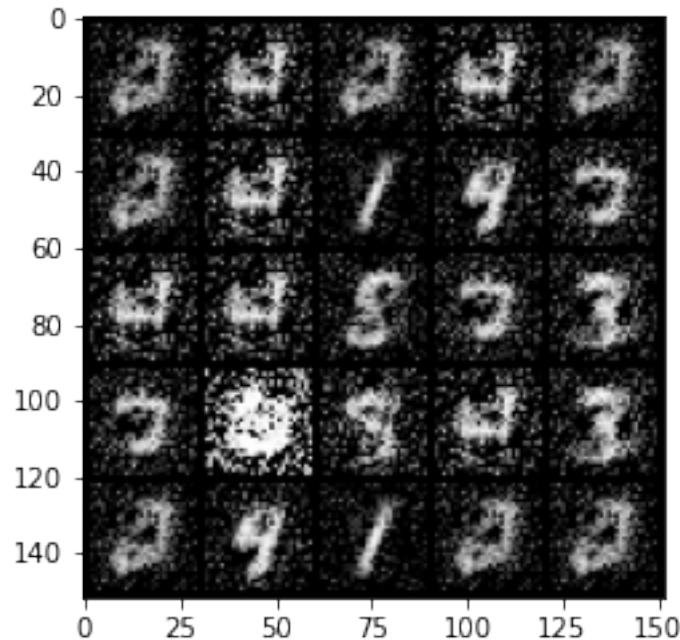
```
Epoch 103, step 48500 -> generator loss: 0.44117567223310483, discriminator
loss: 0.7087075576782219
```





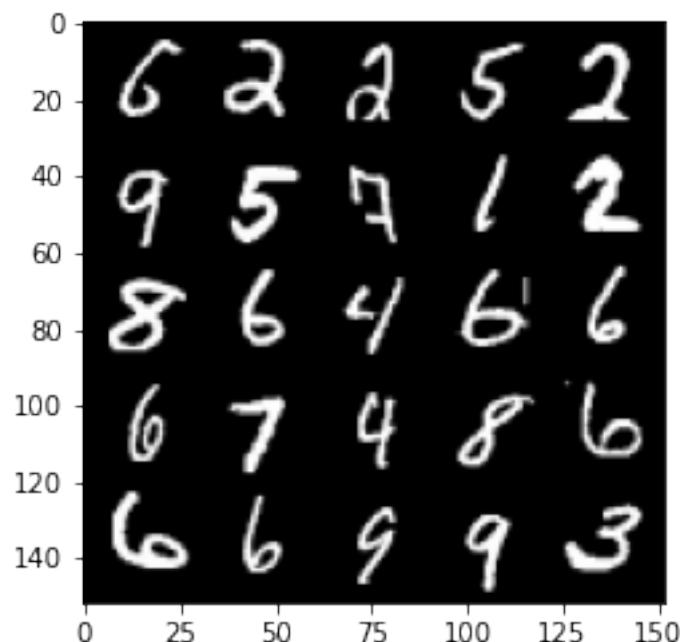
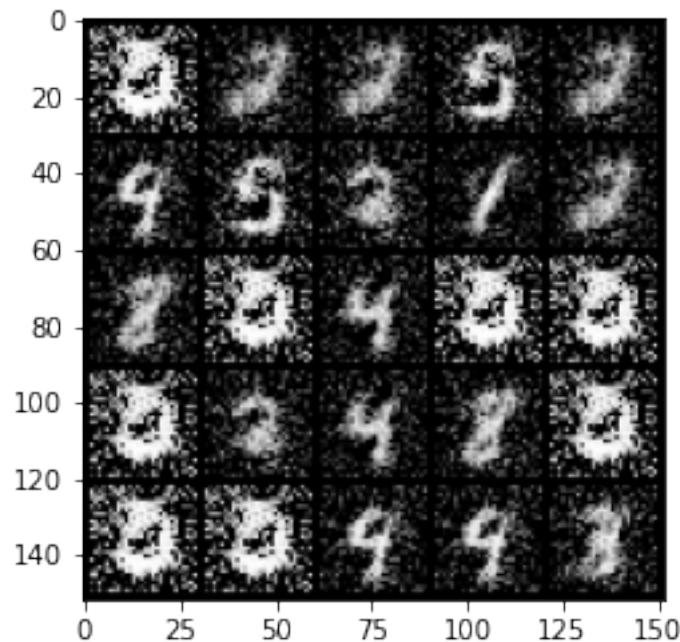
```
100% | 469/469 [00:13<00:00, 35.19it/s]
48% | 224/469 [00:06<00:06, 36.38it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 104, step 49000 -> generator loss: 0.44337123495340347, discriminator loss: 0.702516449928284



```
100%| 469/469 [00:13<00:00, 34.91it/s]
54%| 255/469 [00:07<00:05, 36.34it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

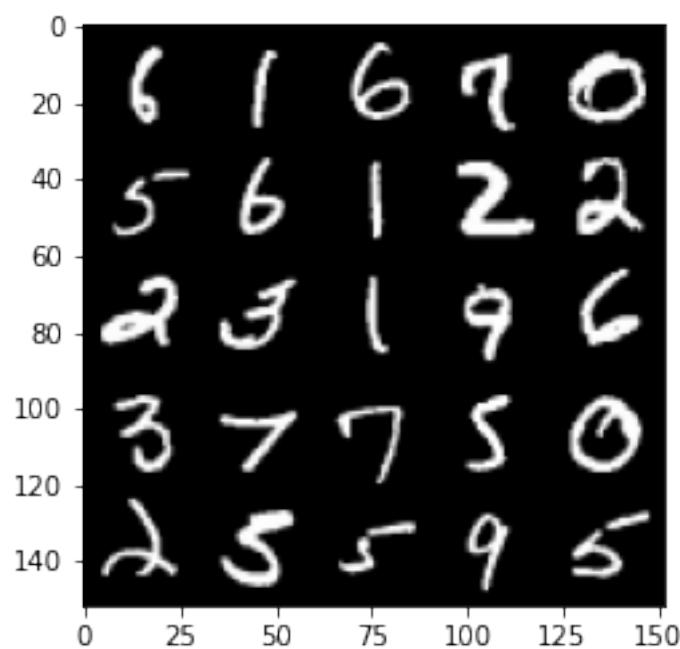
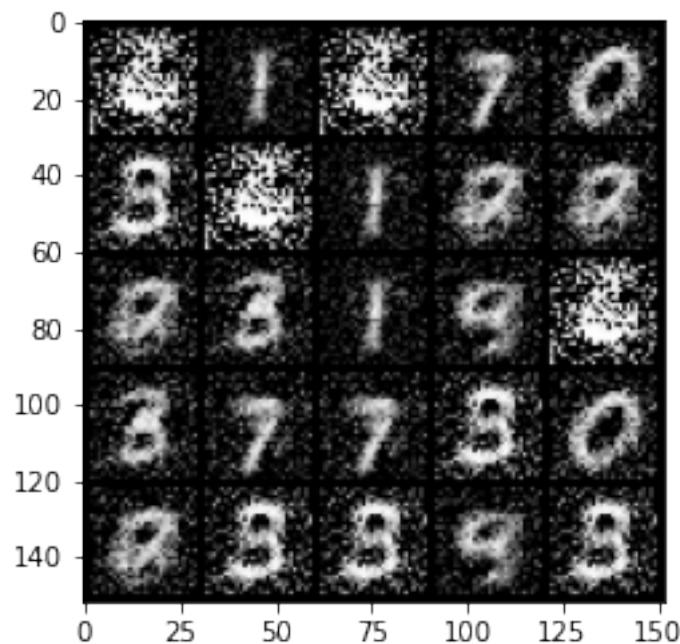
Epoch 105, step 49500 → generator loss: 0.44921983122825626, discriminator loss: 0.6933086256980897



100% | 469/469 [00:13<00:00, 35.13it/s]

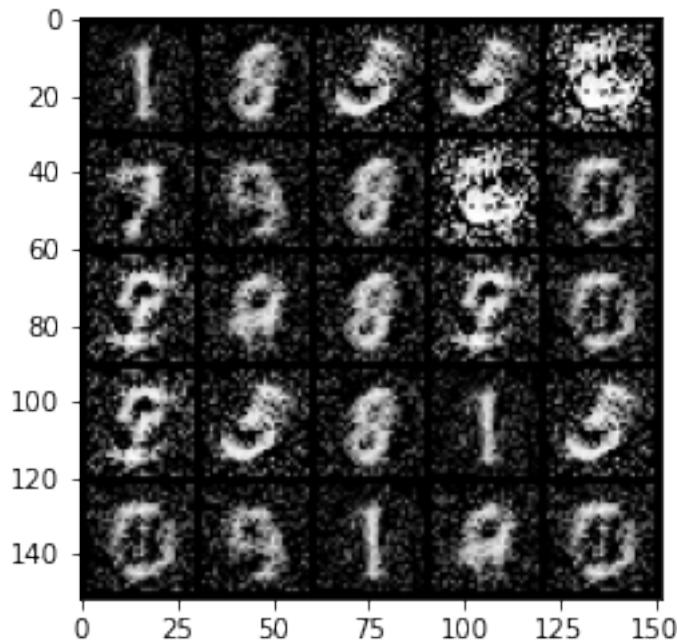
60% | 283/469 [00:07<00:05, 36.28it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

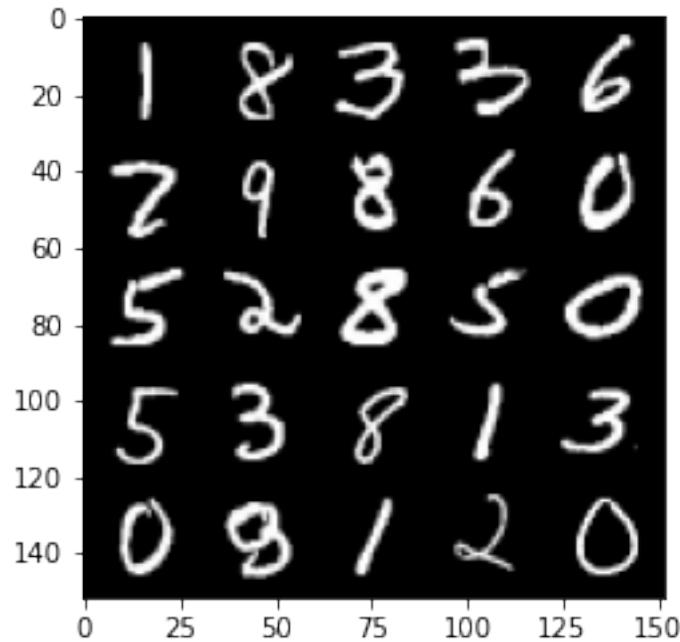
Epoch 106, step 50000 -> generator loss: 0.43784515964984916, discriminator loss: 0.7121764690876009



```
100%|      | 469/469 [00:13<00:00, 35.24it/s]
67%|      | 315/469 [00:08<00:04, 36.47it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

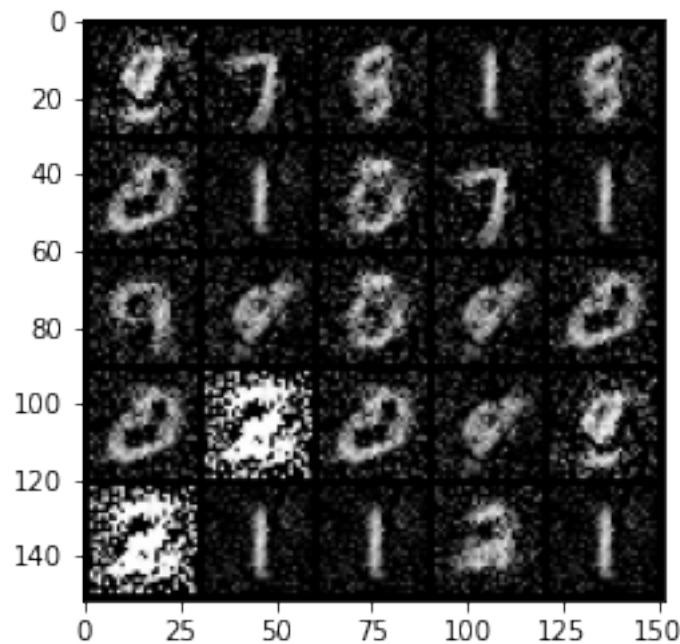
Epoch 107, step 50500 -> generator loss: 0.439743436217308, discriminator loss: 0.7057747519016273

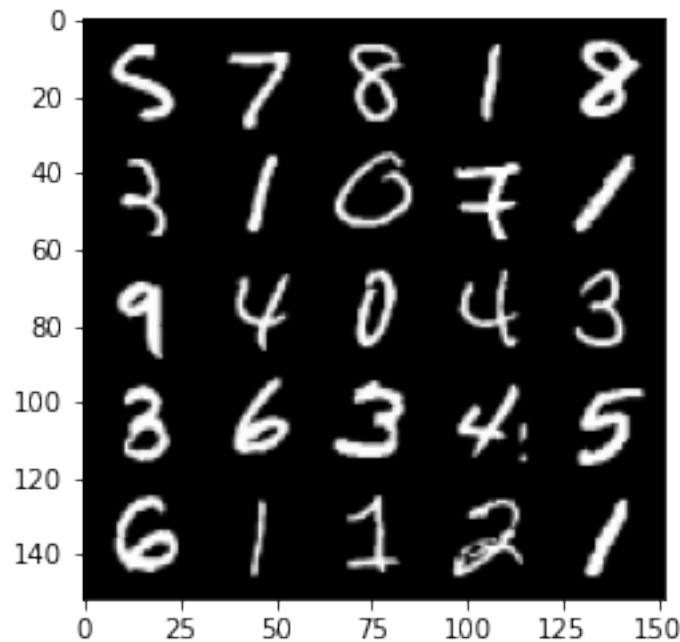




```
100%|      | 469/469 [00:13<00:00, 34.91it/s]
74%|      | 347/469 [00:10<00:03, 35.98it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

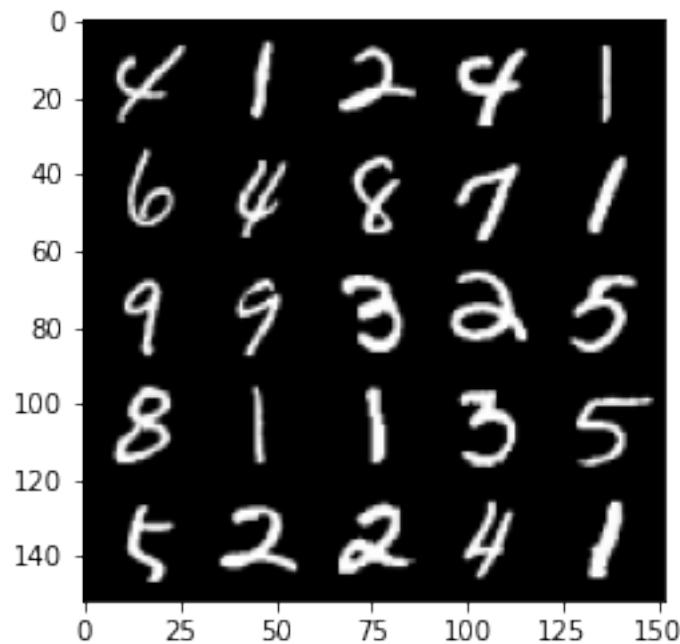
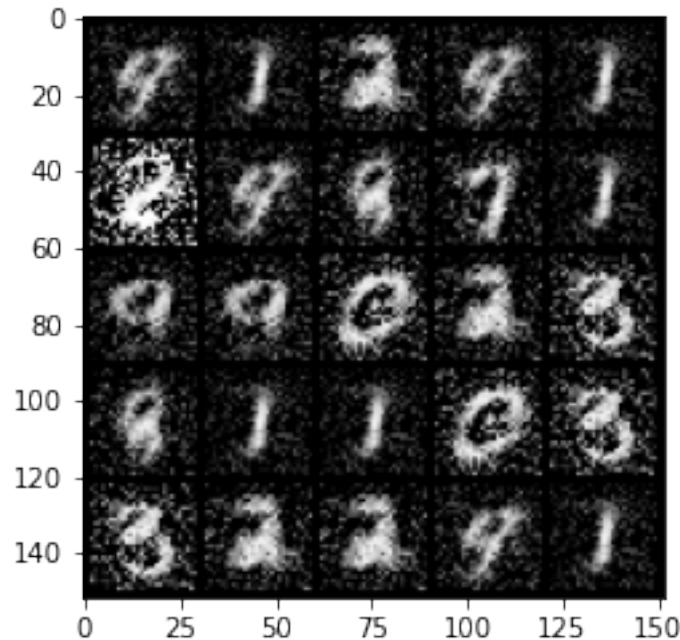
```
Epoch 108, step 51000 -> generator loss: 0.4445080911517145, discriminator loss:
0.6950937688350679
```





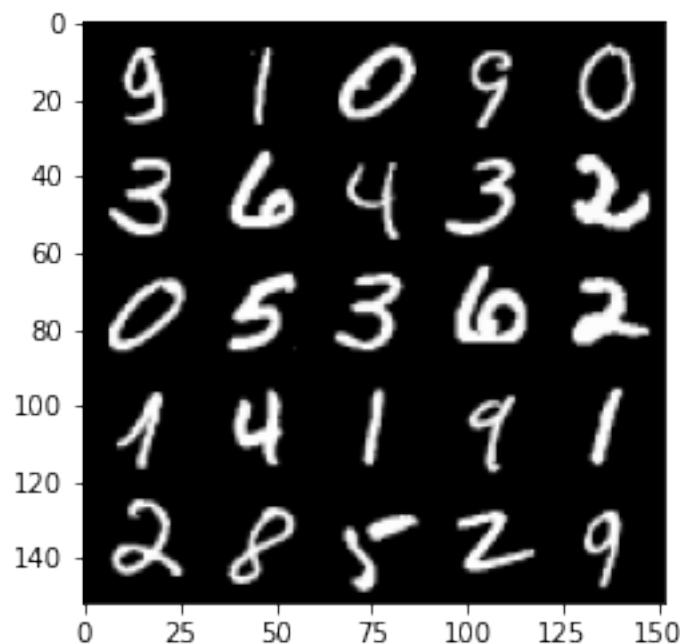
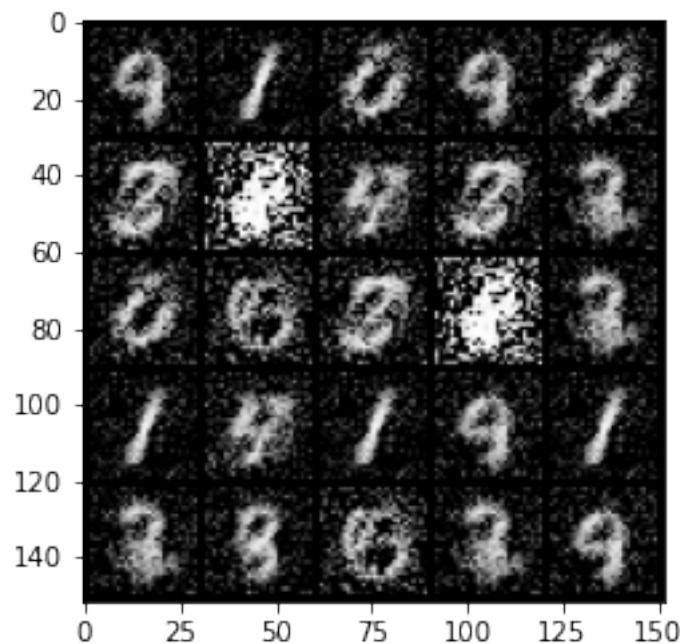
```
100% | 469/469 [00:14<00:00, 33.36it/s]
80% | 376/469 [00:10<00:02, 37.05it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 109, step 51500 -> generator loss: 0.4394330513477326, discriminator loss:
0.7080680409669876
```



```
100%|     | 469/469 [00:13<00:00, 34.38it/s]
87%|     | 407/469 [00:11<00:01, 35.54it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

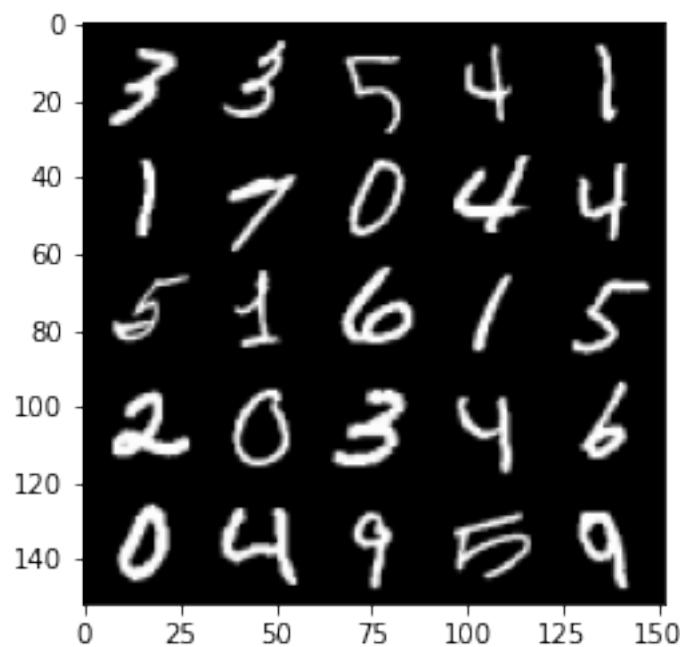
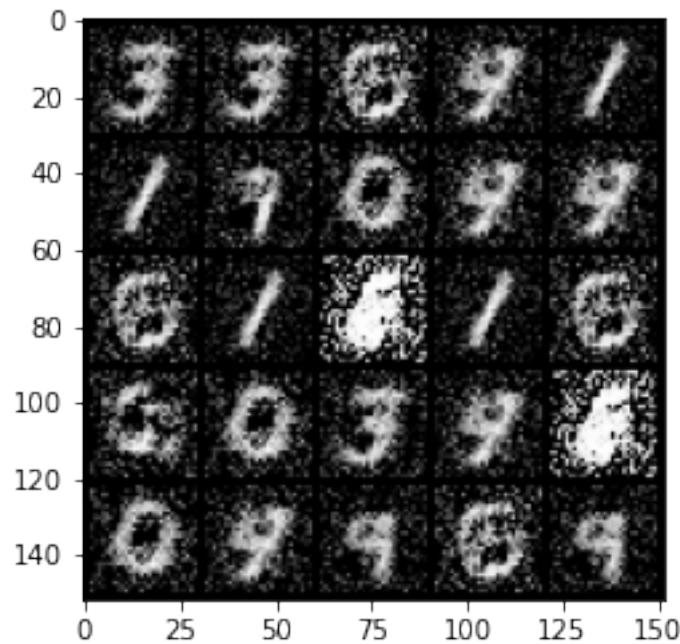
Epoch 110, step 52000 → generator loss: 0.4471110550761222, discriminator loss: 0.7004244589805605



100% | 469/469 [00:13<00:00, 35.20it/s]

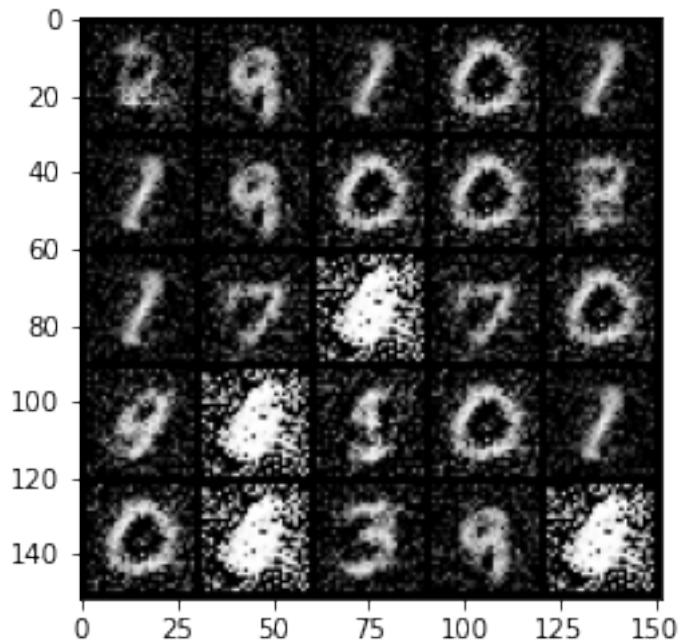
94%| 440/469 [00:12<00:00, 36.24it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

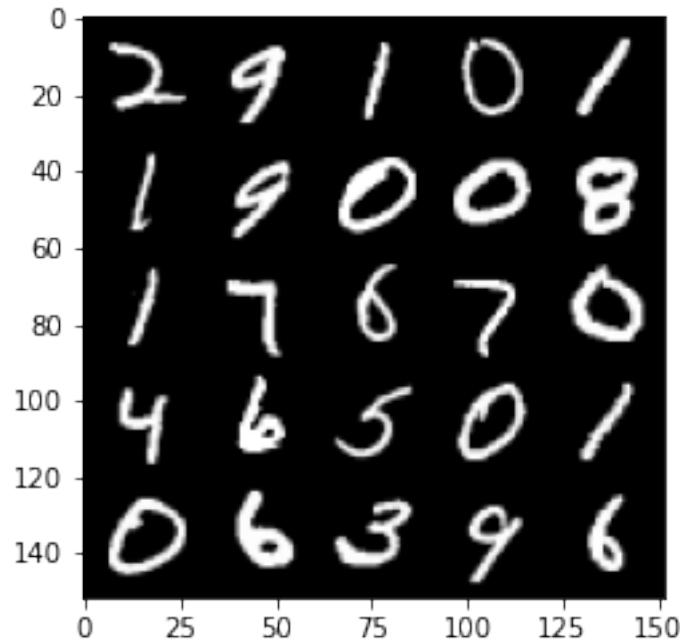
Epoch 111, step 52500 -> generator loss: 0.44825262999534604, discriminator loss: 0.6950632765293119



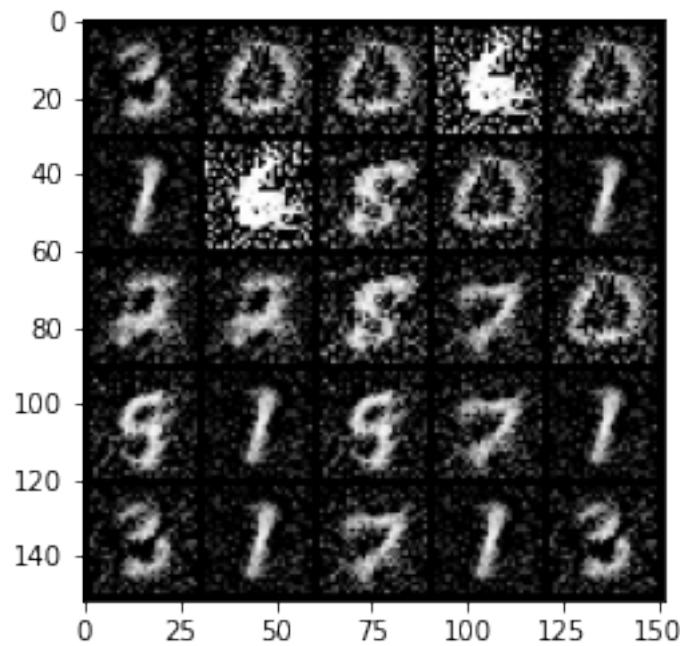
```
100%|     | 469/469 [00:13<00:00, 34.63it/s]
100%|     | 469/469 [00:12<00:00, 36.24it/s]
  0%|     | 0/469 [00:00<?, ?it/s]Clipping input data to the valid range
for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

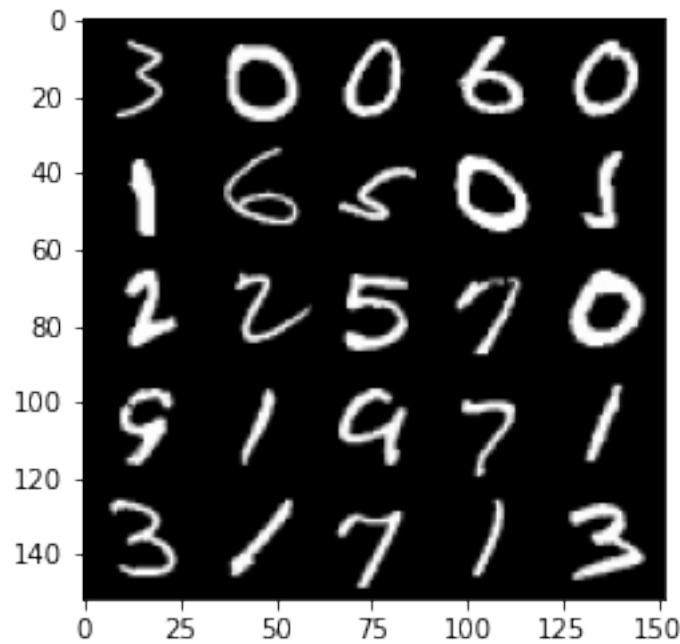
Epoch 113, step 53000 -> generator loss: 0.45074951869249386, discriminator loss: 0.6856565803289404



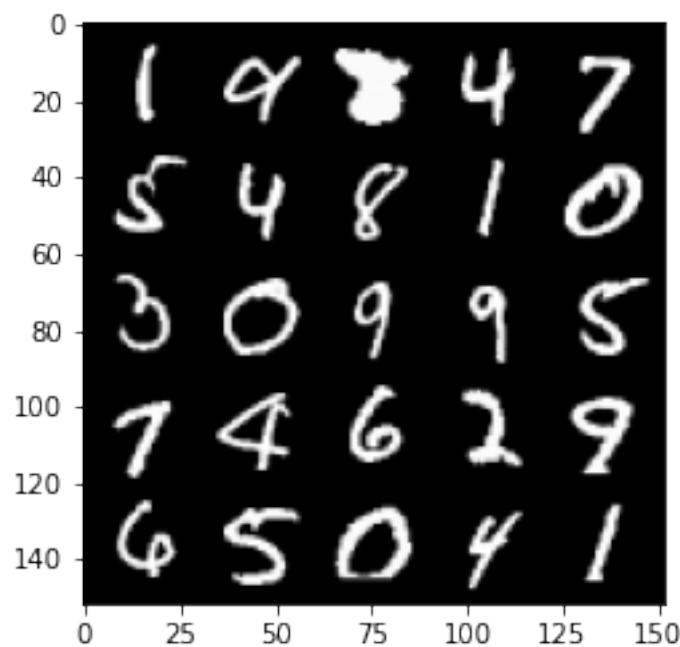
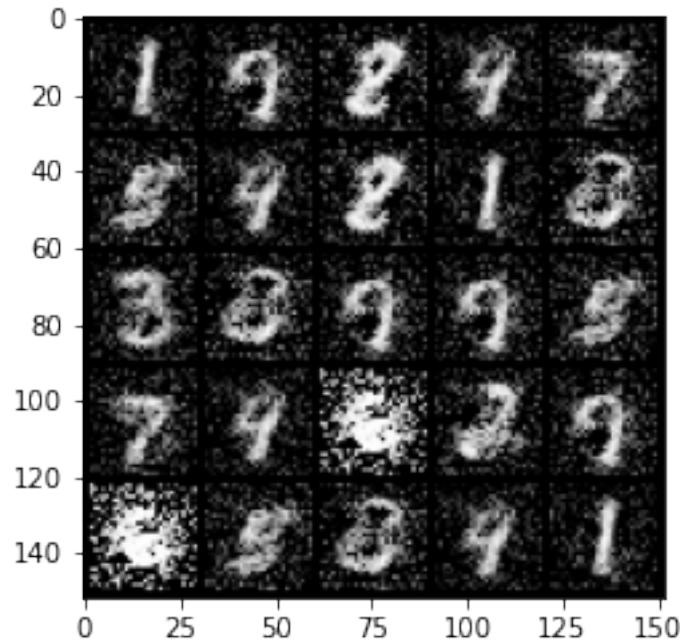


```
100%|      | 469/469 [00:13<00:00, 35.35it/s]
 7%|      | 34/469 [00:00<00:12, 36.14it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 114, step 53500 -> generator loss: 0.43842934614419915, discriminator
loss: 0.7145203109979628
```





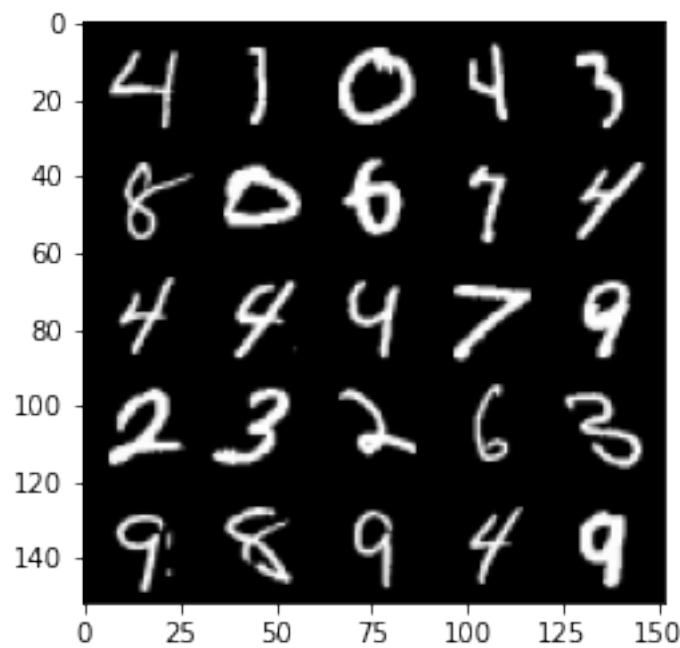
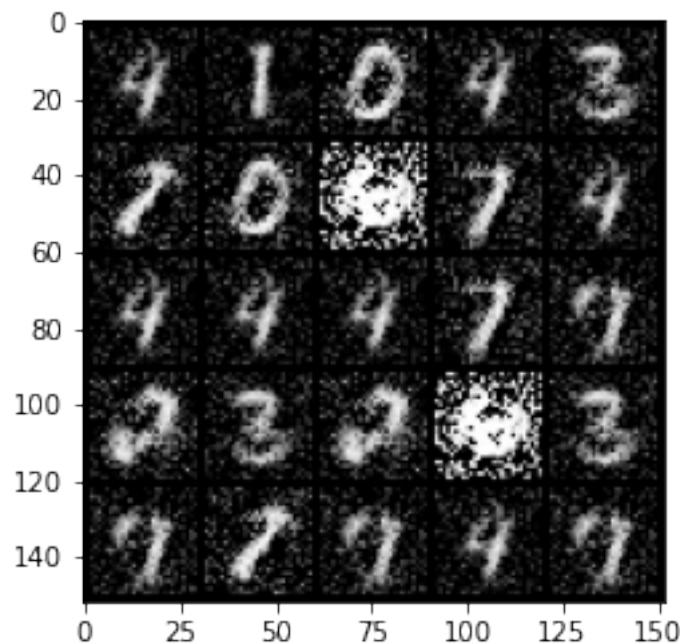
```
100%|    | 469/469 [00:13<00:00, 34.83it/s]
13%|    | 63/469 [00:01<00:10, 37.17it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 115, step 54000 -> generator loss: 0.44097446191310885, discriminator
loss: 0.7093875875473019
```



100% | 469/469 [00:13<00:00, 35.13it/s]  
20% | 96/469 [00:02<00:10, 36.60it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 116, step 54500 -> generator loss: 0.4388788073658944, discriminator loss:

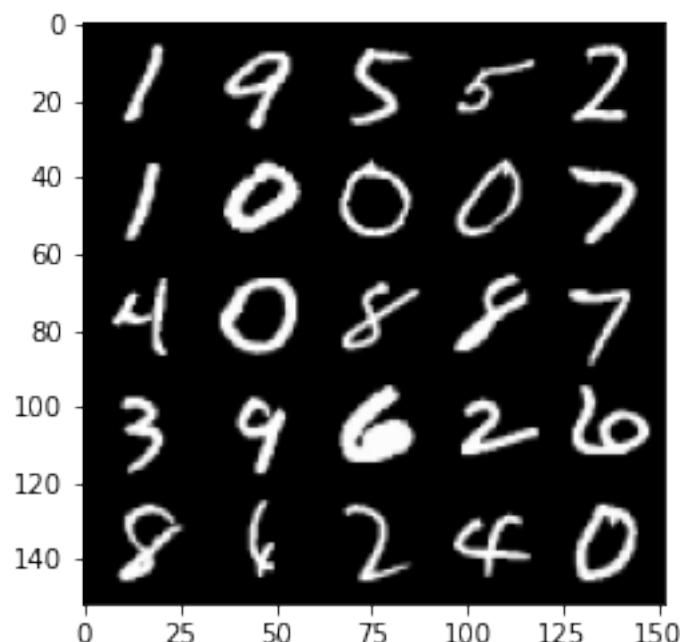
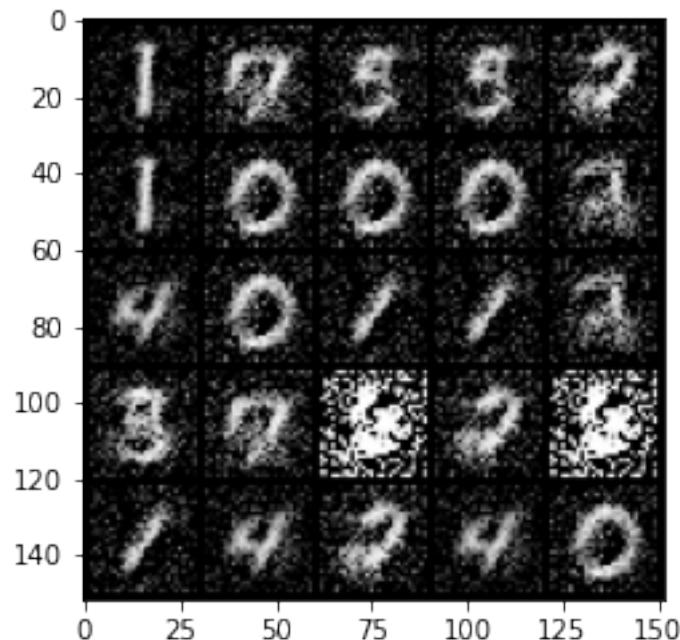
0.7109407836198809



100% | 469/469 [00:13<00:00, 34.98it/s]  
27% | 127/469 [00:03<00:09, 36.14it/s] Clipping input data to the

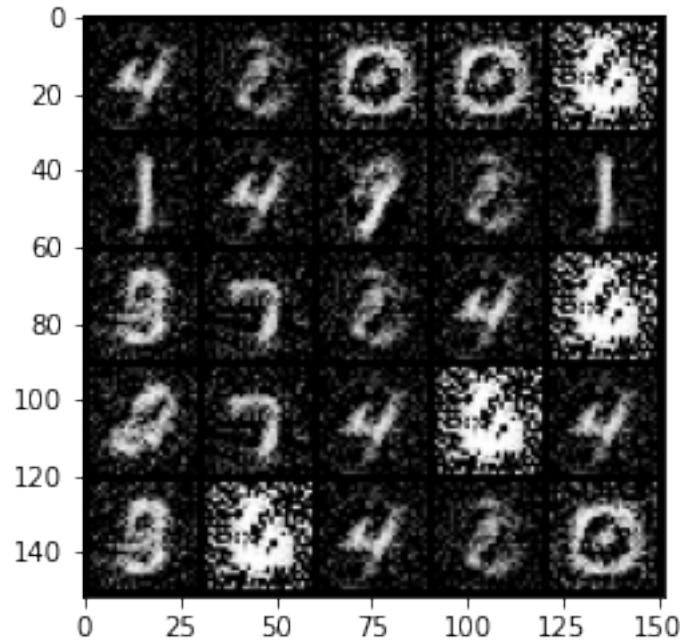
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

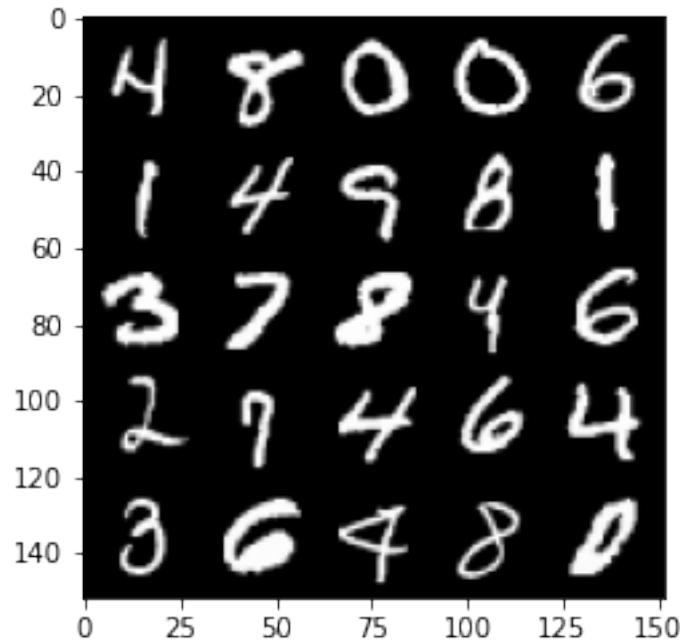
Epoch 117, step 55000 -> generator loss: 0.44138994348049165, discriminator loss: 0.7097022224664691



```
100%|      | 469/469 [00:13<00:00, 35.15it/s]
33%|      | 156/469 [00:04<00:08, 36.67it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

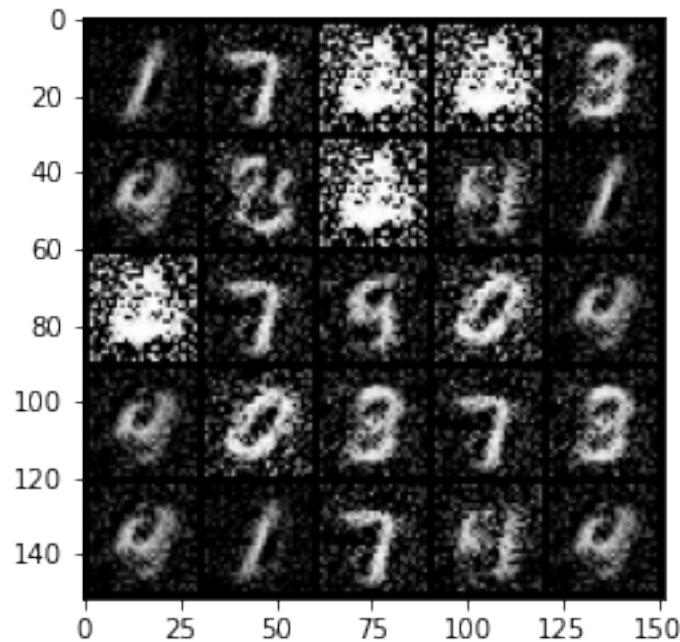
```
Epoch 118, step 55500 -> generator loss: 0.444983676731586, discriminator loss:
0.7045122679471977
```

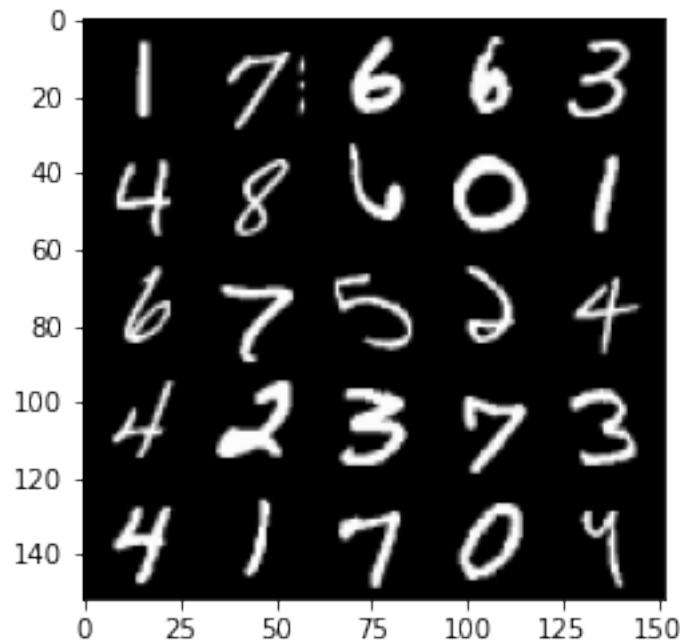




```
100%|      | 469/469 [00:13<00:00, 35.14it/s]
40%|      | 187/469 [00:05<00:07, 36.59it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

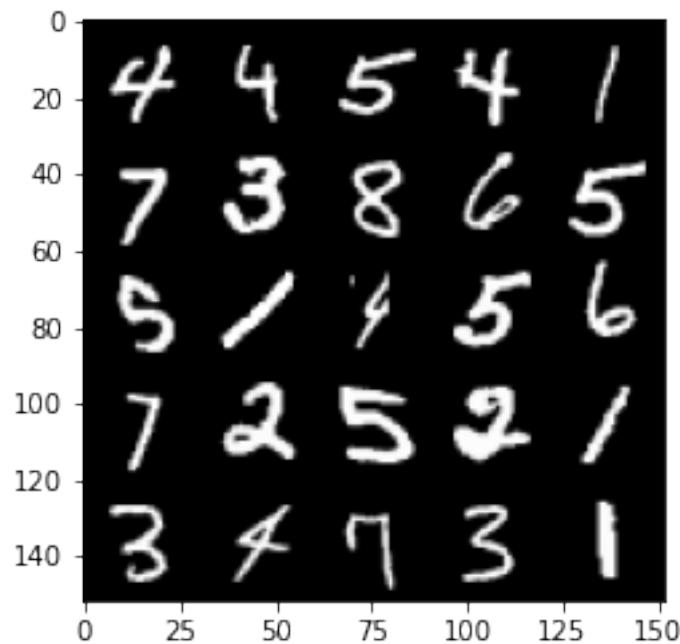
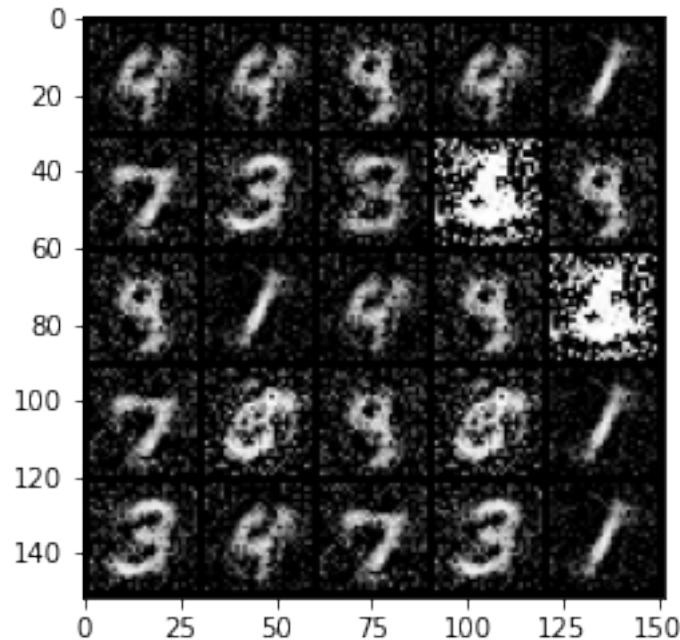
Epoch 119, step 56000 -> generator loss: 0.44103656750917414, discriminator loss: 0.7022318880558008





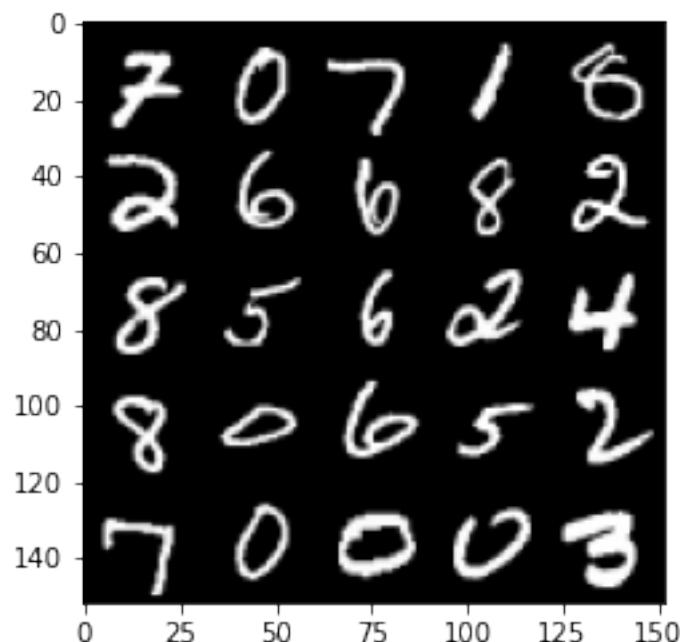
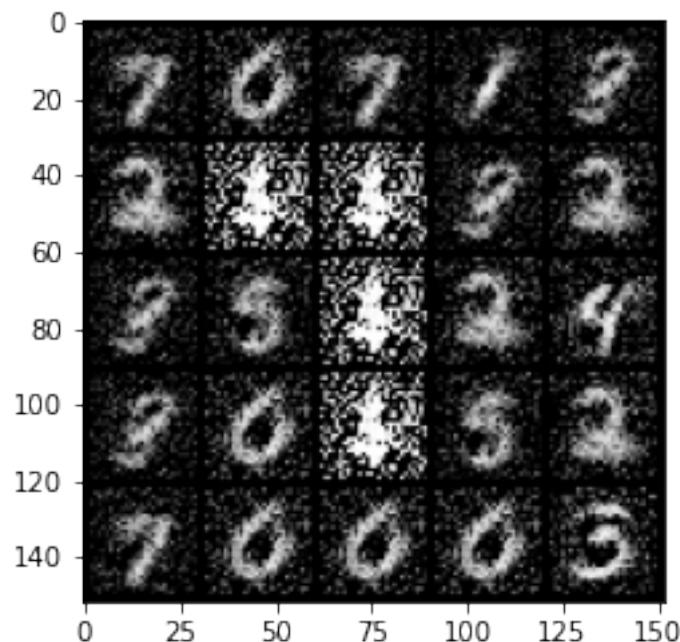
```
100% | 469/469 [00:13<00:00, 34.70it/s]
46% | 218/469 [00:06<00:07, 33.65it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 120, step 56500 -> generator loss: 0.45415419828891745, discriminator loss: 0.685715380549431



```
100%|      | 469/469 [00:13<00:00, 34.99it/s]
54%|      | 251/469 [00:06<00:05, 36.82it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

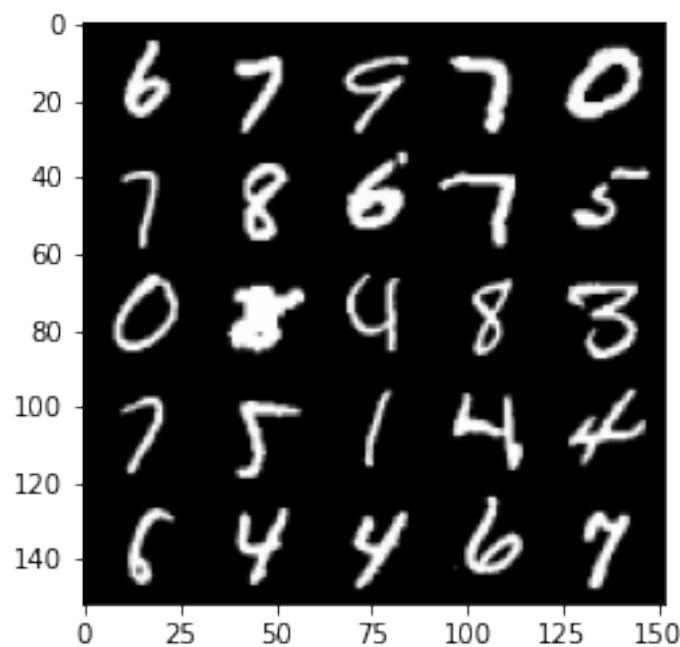
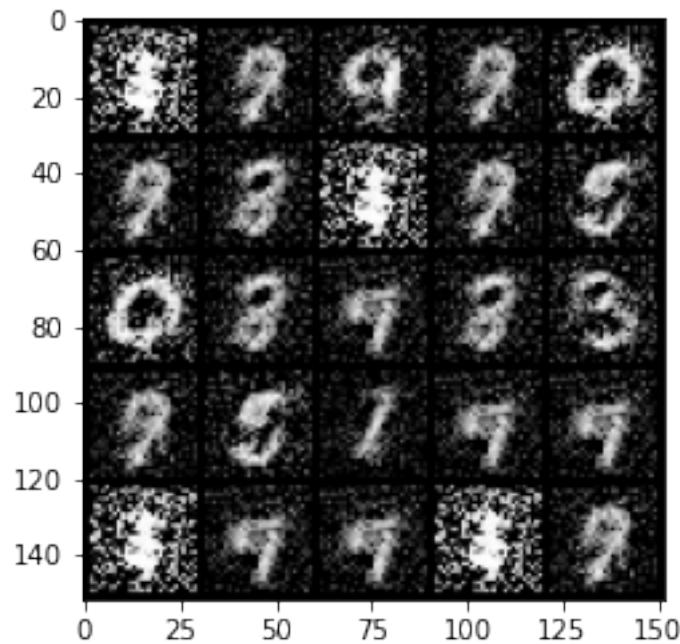
Epoch 121, step 57000 -> generator loss: 0.4442338325977331, discriminator loss: 0.7067201660871505



100% | 469/469 [00:13<00:00, 33.60it/s]

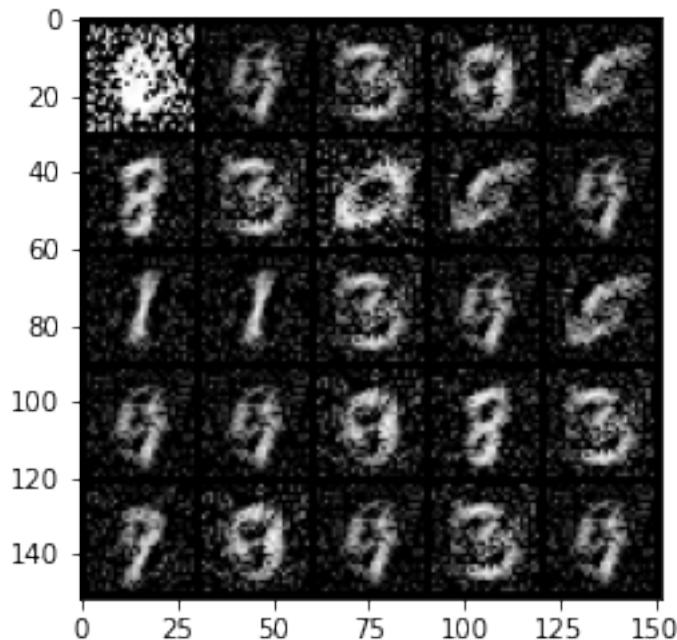
60%| 280/469 [00:07<00:05, 37.11it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

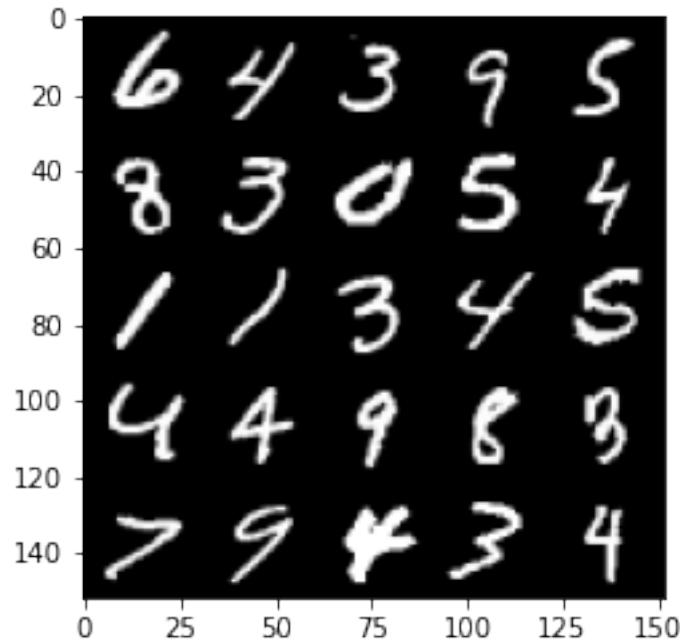
Epoch 122, step 57500 -> generator loss: 0.43802810126543057, discriminator loss: 0.712893973350525



```
100%|      | 469/469 [00:13<00:00, 34.97it/s]
67%|      | 312/469 [00:08<00:04, 35.87it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

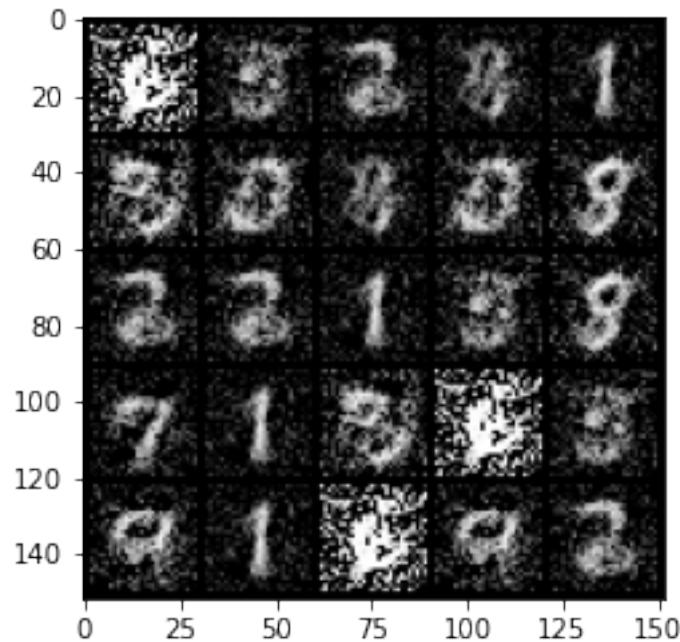
```
Epoch 123, step 58000 -> generator loss: 0.4435522361397744, discriminator loss:
0.7040805637836463
```

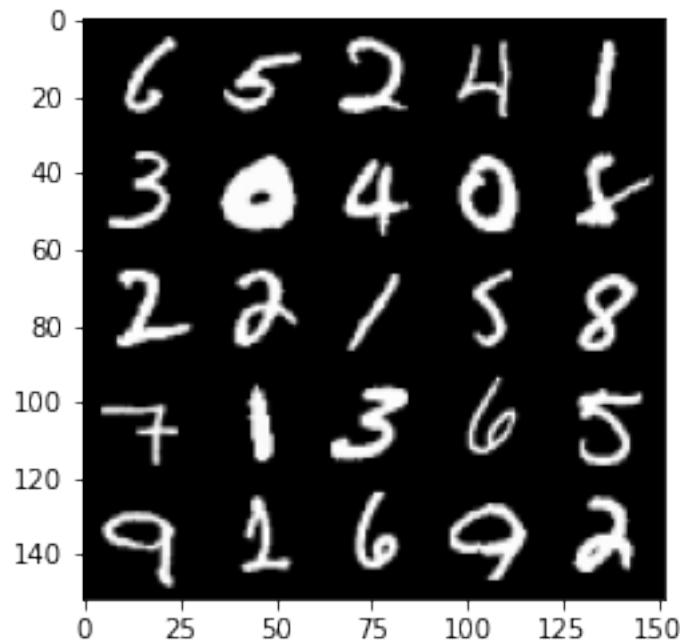




```
100%|      | 469/469 [00:13<00:00, 35.22it/s]
73%|      | 342/469 [00:09<00:03, 36.47it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

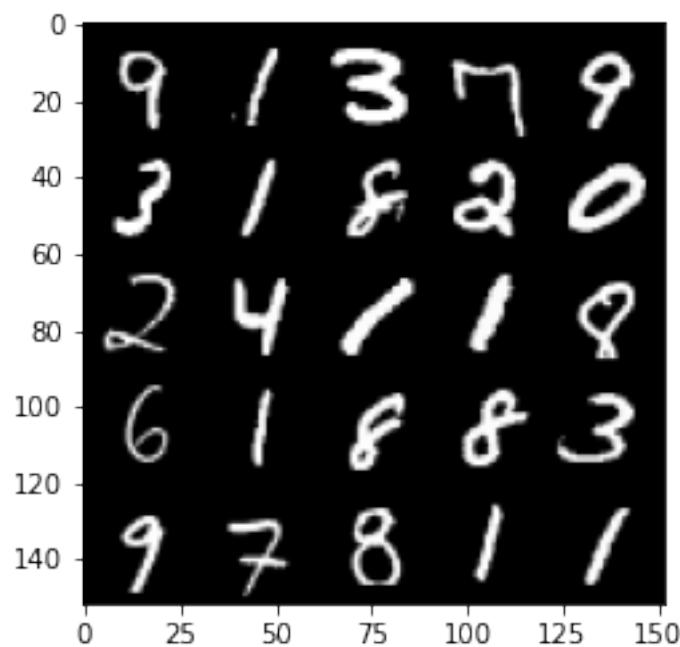
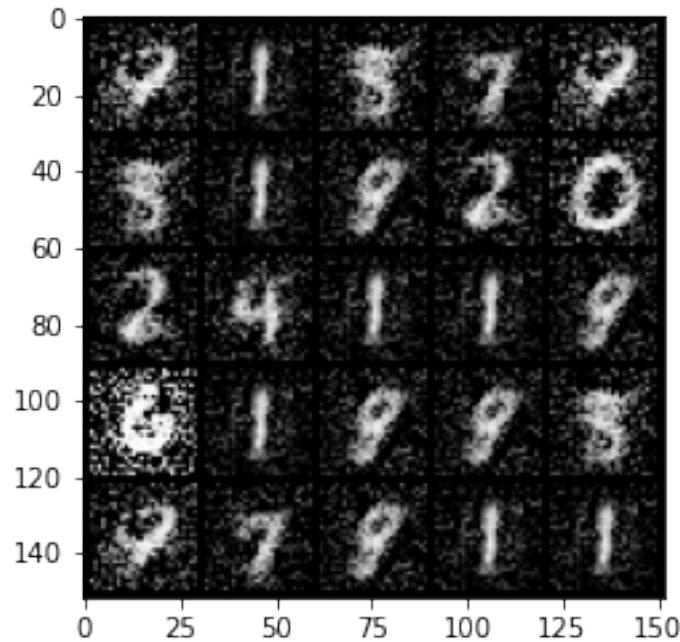
```
Epoch 124, step 58500 -> generator loss: 0.4471210025548935, discriminator loss:
0.6903330471515648
```





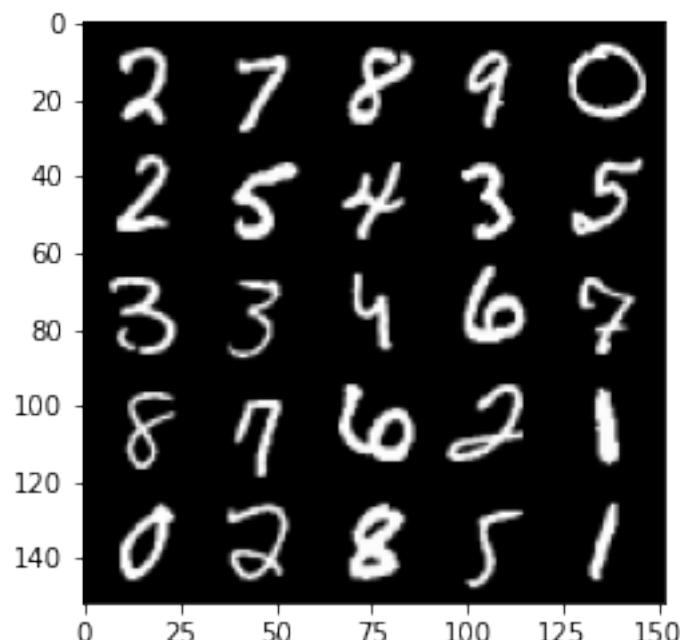
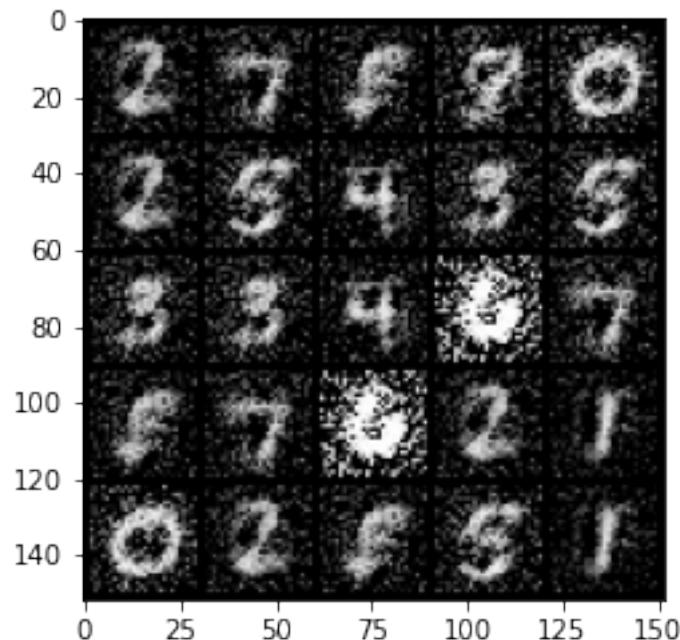
```
100% | 469/469 [00:13<00:00, 35.34it/s]
79% | 372/469 [00:10<00:02, 36.25it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 125, step 59000 -> generator loss: 0.44701519554853436, discriminator
loss: 0.6994962832927704
```



```
100%|      | 469/469 [00:13<00:00, 35.31it/s]
86%|      | 404/469 [00:11<00:01, 36.89it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

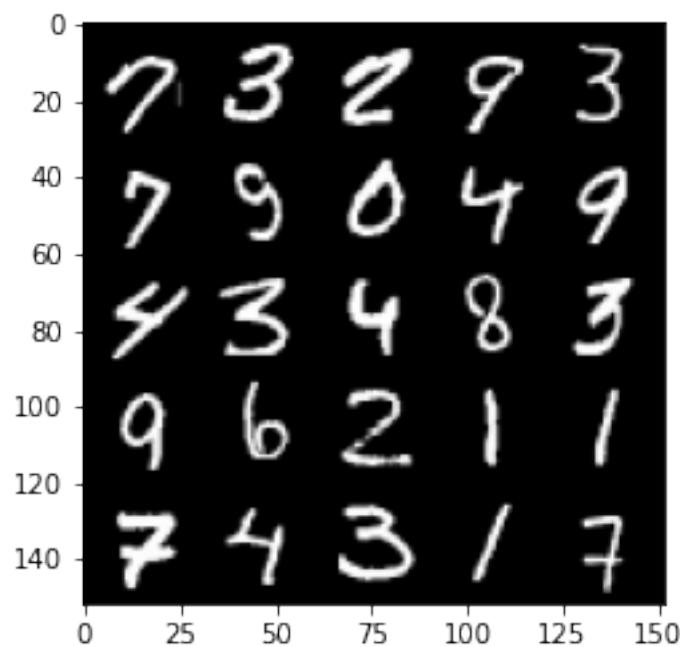
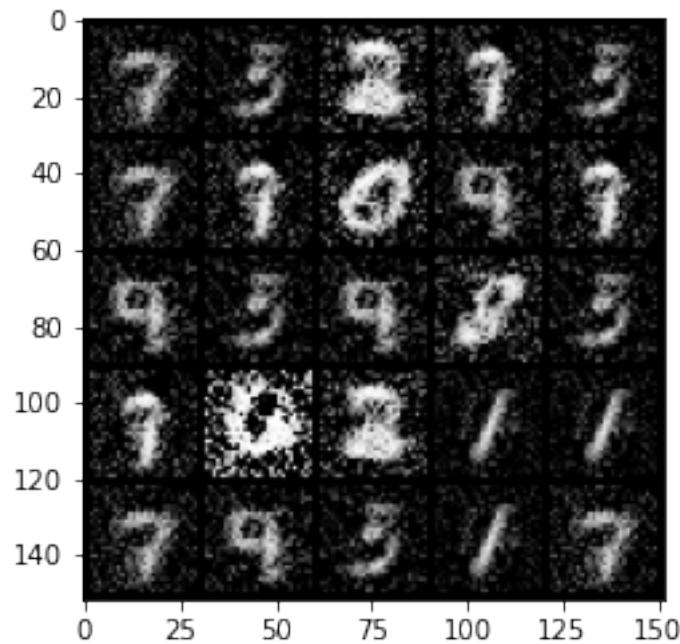
Epoch 126, step 59500 → generator loss: 0.44514803940057773, discriminator loss: 0.7006635057926178



100% | 469/469 [00:13<00:00, 35.56it/s]

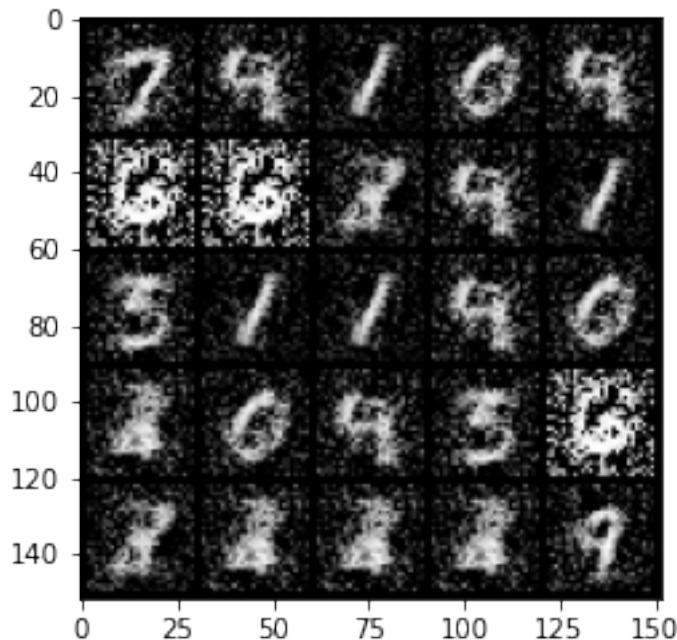
93%| 436/469 [00:12<00:00, 36.02it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

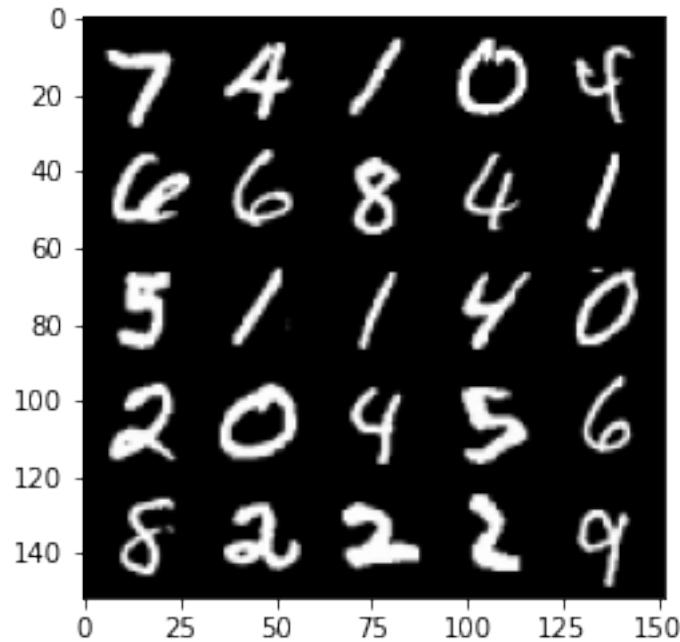
Epoch 127, step 60000 -> generator loss: 0.44013789689540855, discriminator loss: 0.7146135635375975



```
100%|    | 469/469 [00:13<00:00, 35.15it/s]
100%|    | 467/469 [00:12<00:00, 36.71it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

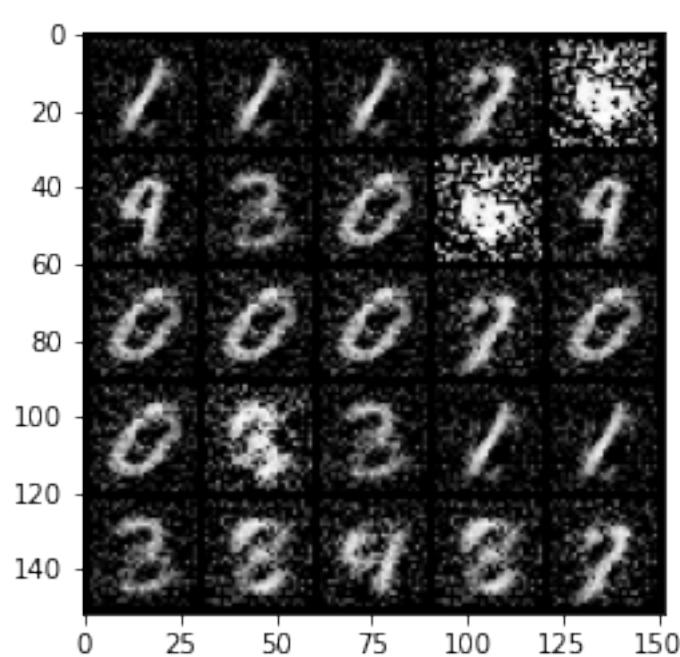
Epoch 128, step 60500 -> generator loss: 0.4435591117739676, discriminator loss:  
0.7058157346248627

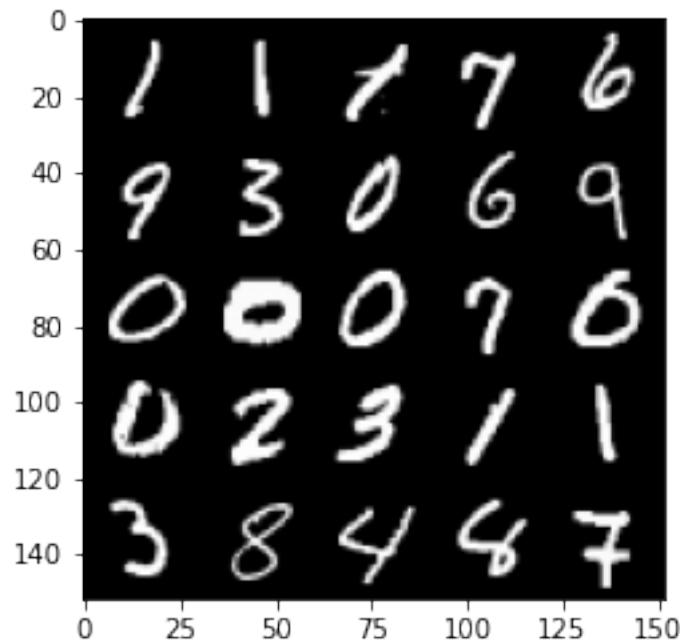




```
100%| 469/469 [00:13<00:00, 35.15it/s]
100%| 469/469 [00:12<00:00, 36.37it/s]
 6%| 30/469 [00:00<00:12, 34.50it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

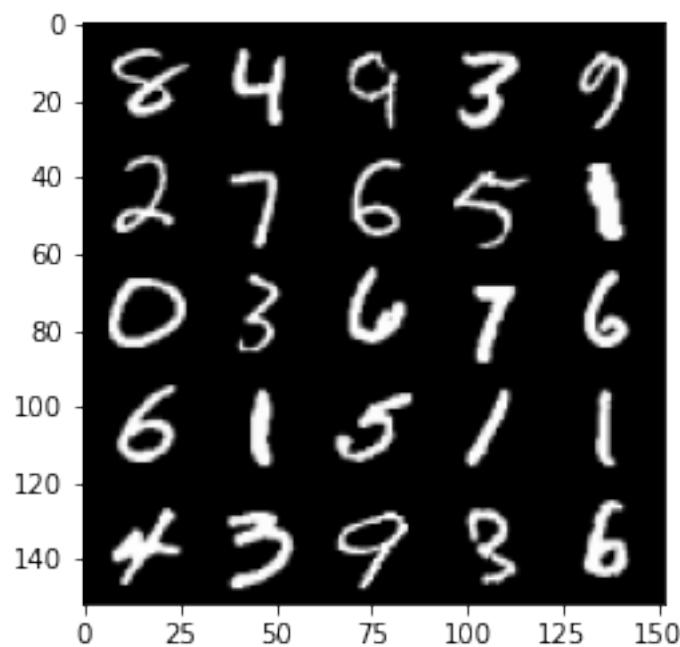
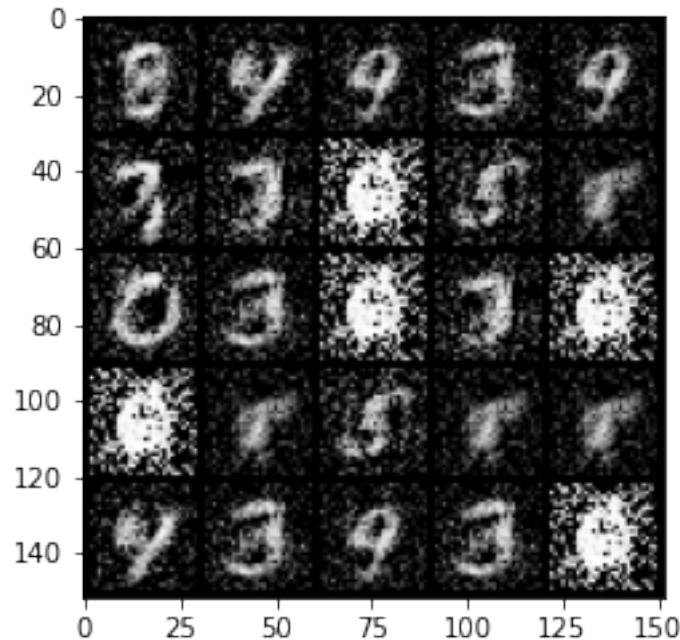
Epoch 130, step 61000 -> generator loss: 0.44652244597673413, discriminator loss: 0.6990013310909269





```
100%| 469/469 [00:13<00:00, 35.37it/s]
13%| 60/469 [00:01<00:11, 37.10it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

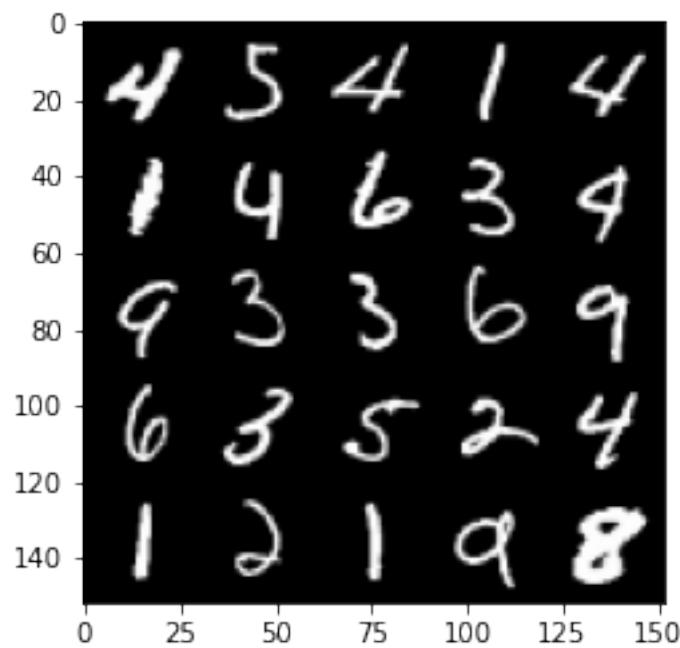
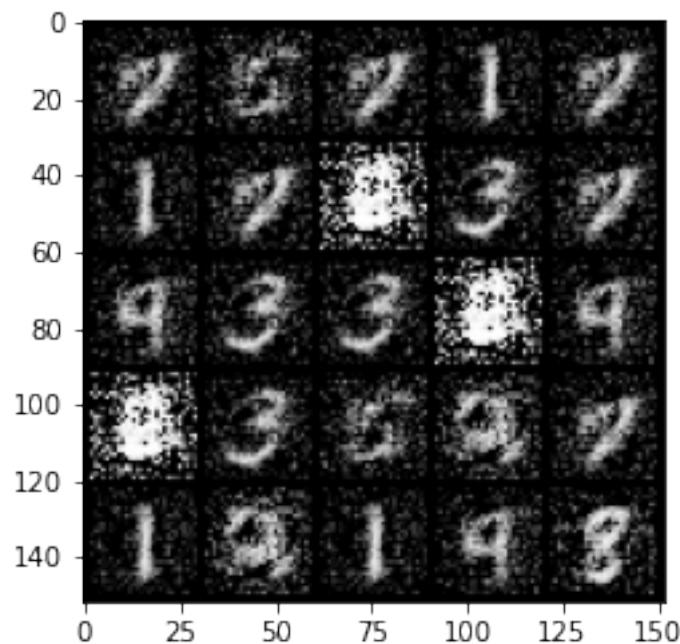
```
Epoch 131, step 61500 -> generator loss: 0.4432914264202118, discriminator loss:
0.7019779734611512
```



```
100% | 469/469 [00:13<00:00, 35.11it/s]
20% | 92/469 [00:02<00:10, 36.54it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 132, step 62000 -> generator loss: 0.4464771730899811, discriminator loss:

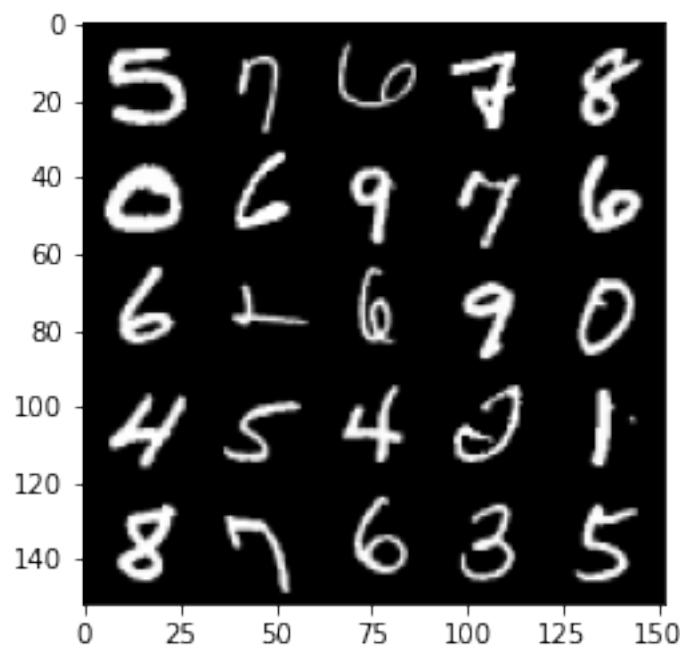
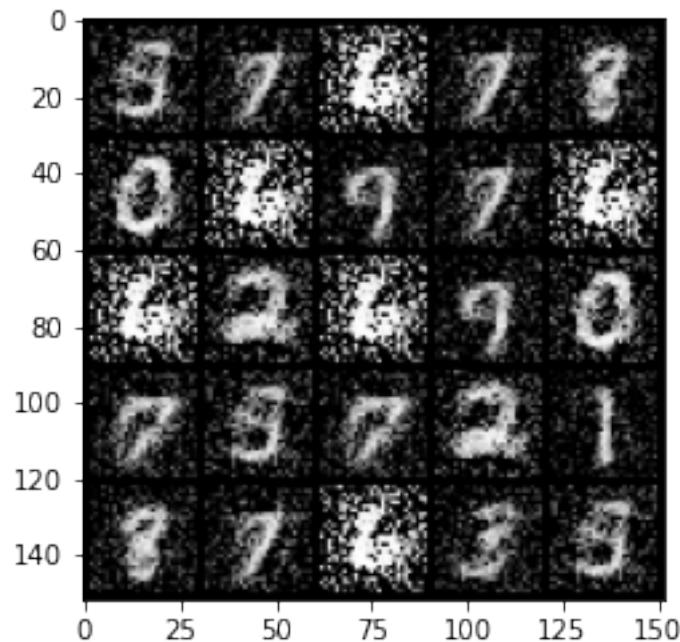
0.6936687544584279



100% | 469/469 [00:13<00:00, 35.18it/s]  
26% | 123/469 [00:03<00:09, 37.13it/s] Clipping input data to the

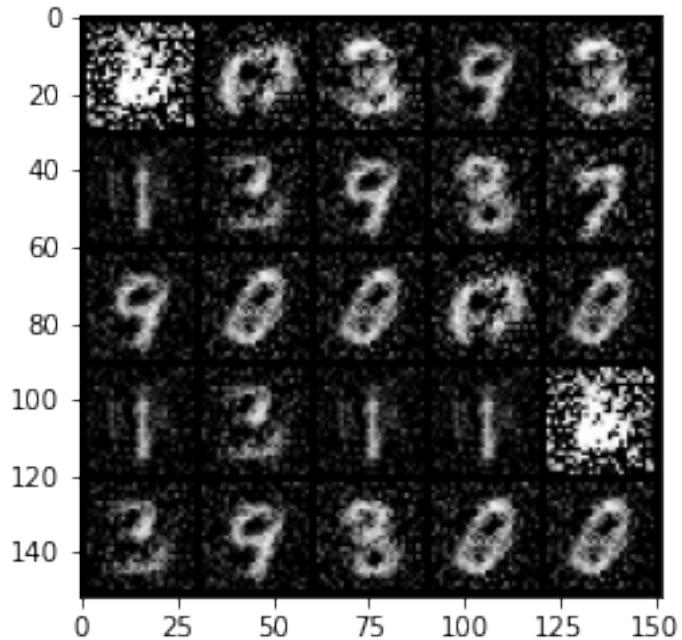
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

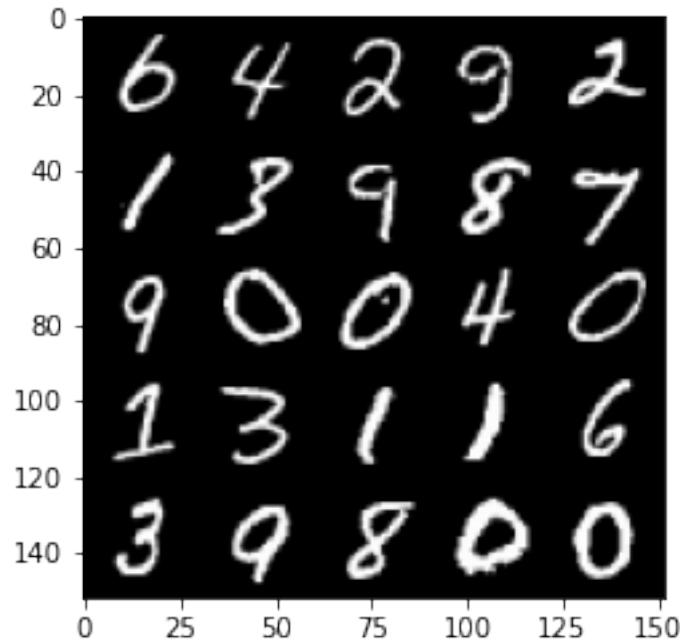
Epoch 133, step 62500 -> generator loss: 0.44150420534610724, discriminator loss: 0.7056791276931758



```
100%|      | 469/469 [00:13<00:00, 35.29it/s]
32%|      | 151/469 [00:04<00:08, 37.26it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

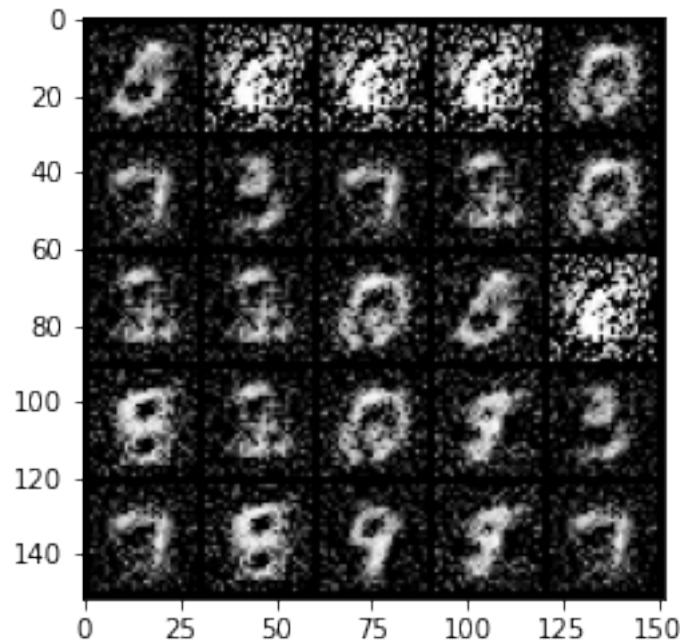
```
Epoch 134, step 63000 -> generator loss: 0.4471374649405481, discriminator loss:
0.6915470374822618
```

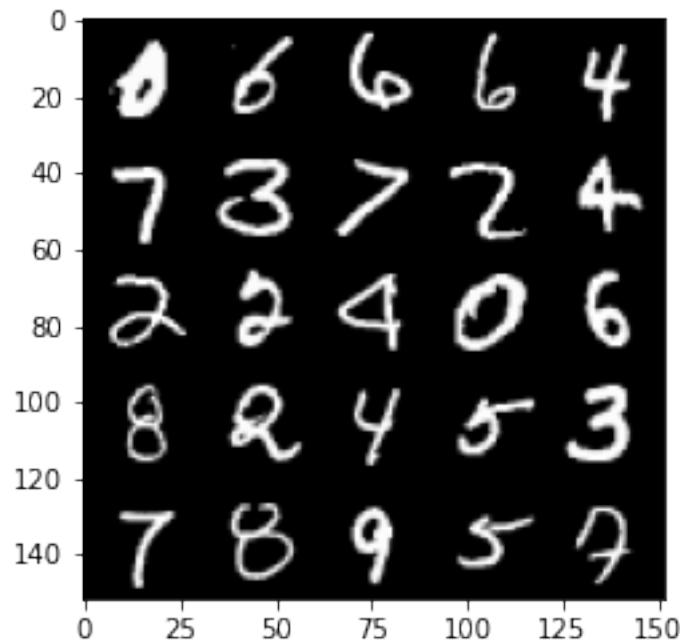




```
100%|      | 469/469 [00:13<00:00, 34.94it/s]
39%|      | 184/469 [00:05<00:07, 36.39it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

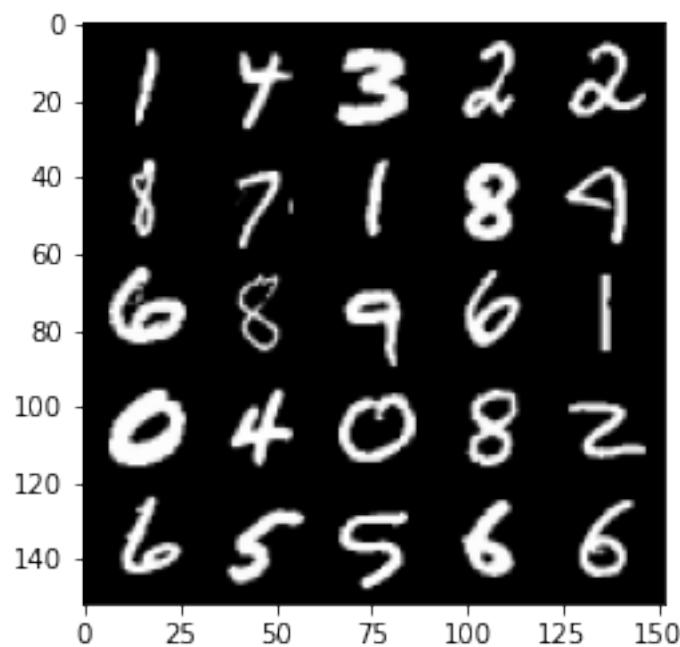
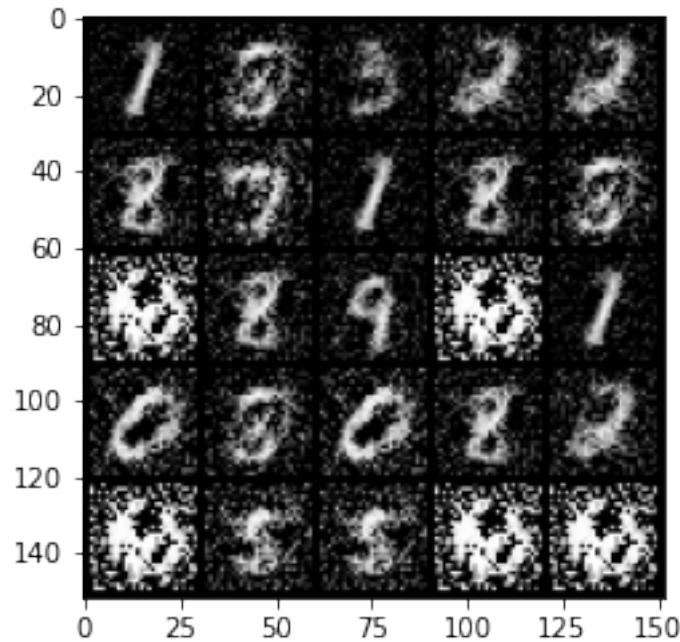
Epoch 135, step 63500 -> generator loss: 0.44544639289379095, discriminator loss: 0.6992354280948643





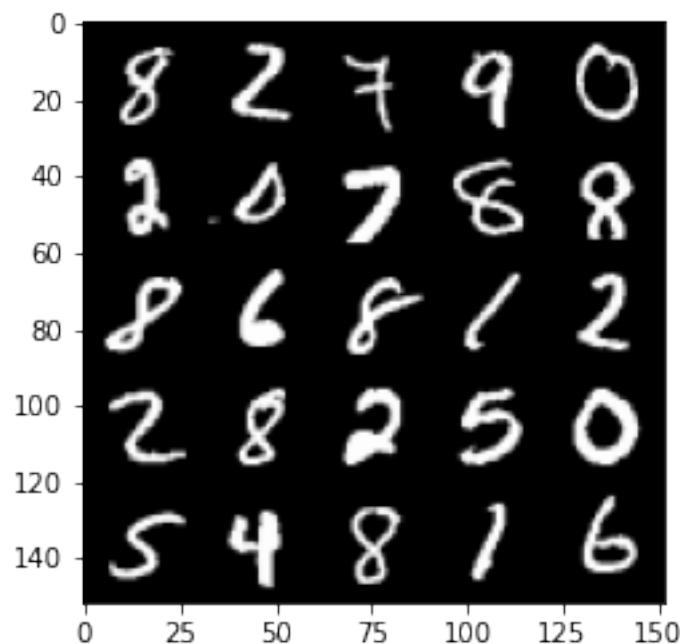
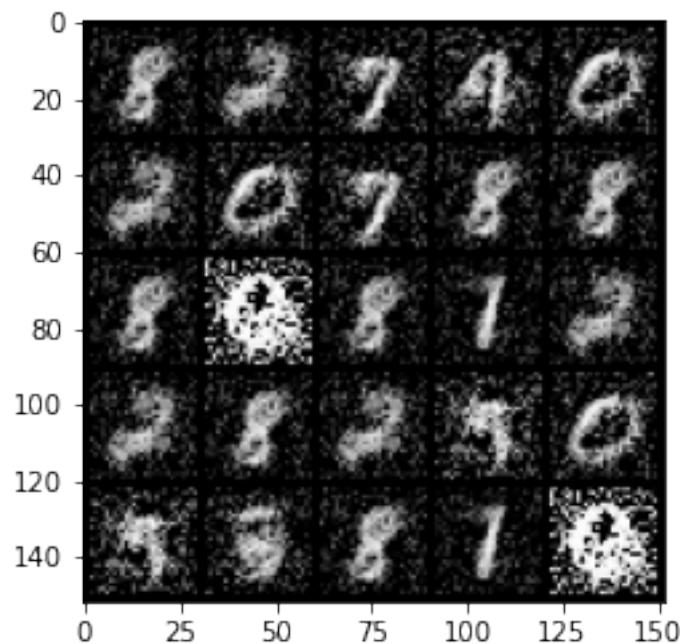
```
100% | 469/469 [00:13<00:00, 35.31it/s]
46% | 214/469 [00:05<00:06, 36.60it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 136, step 64000 -> generator loss: 0.4466990092396733, discriminator loss:
0.6917109315395363
```



```
100%|      | 469/469 [00:13<00:00, 35.33it/s]
53%|      | 247/469 [00:06<00:06, 36.08it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

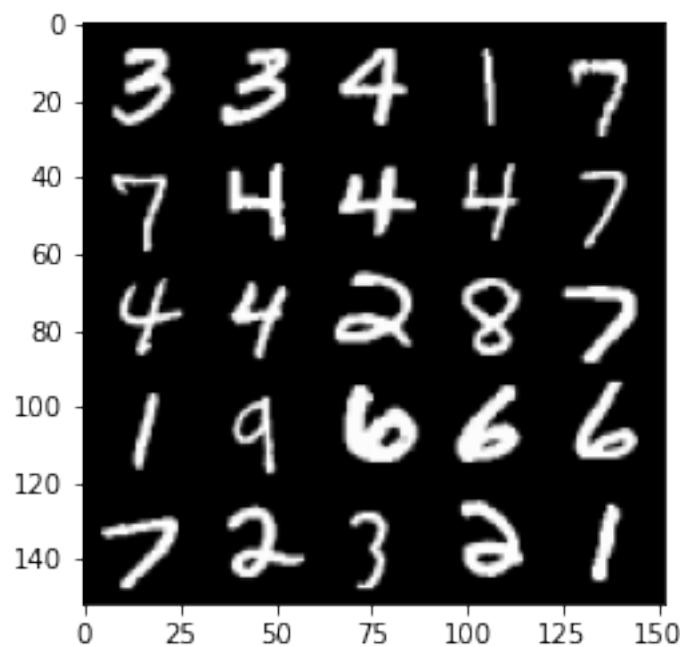
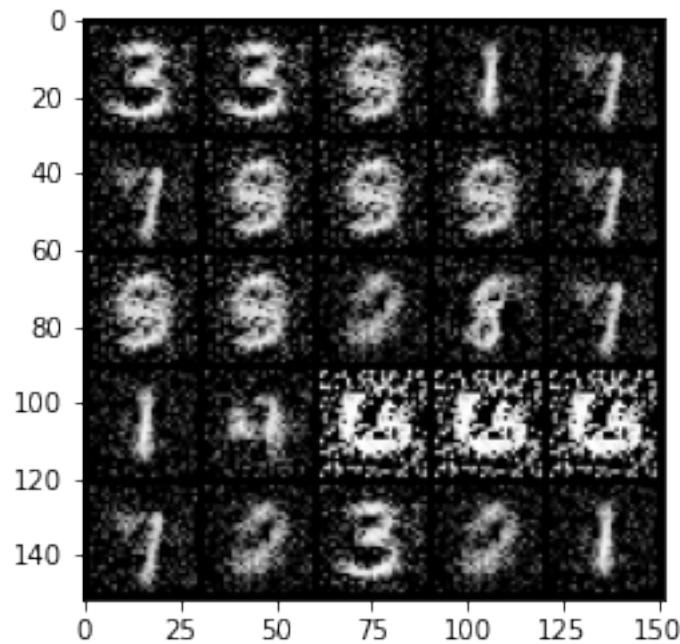
Epoch 137, step 64500 → generator loss: 0.4462400147318836, discriminator loss: 0.7064309490919102



100% | 469/469 [00:13<00:00, 35.15it/s]

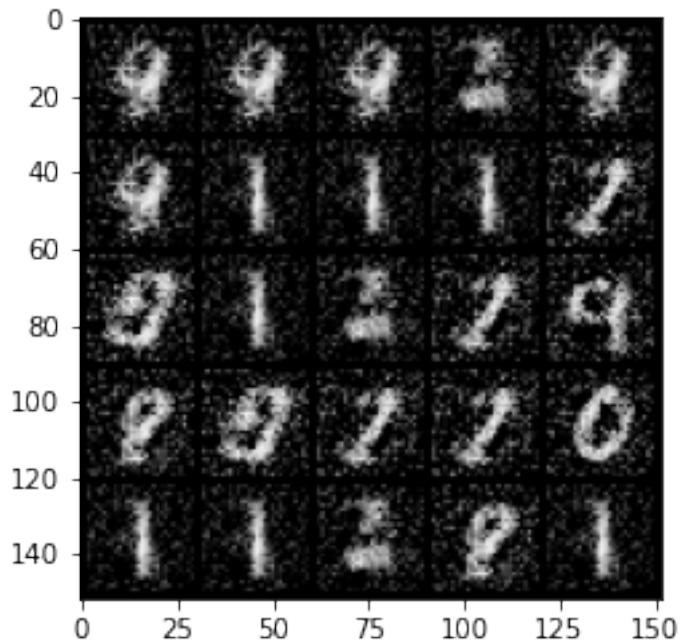
59%| 275/469 [00:07<00:05, 37.05it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

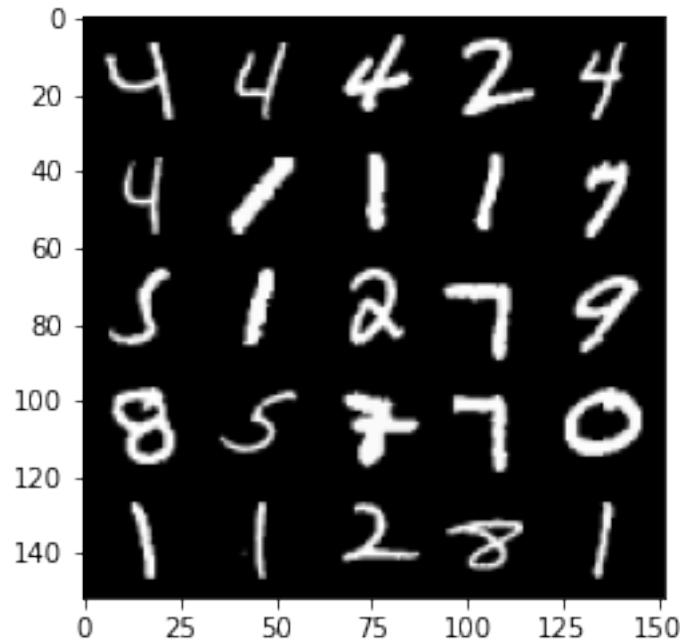
Epoch 138, step 65000 -> generator loss: 0.45467144429683687, discriminator loss: 0.6869929312467575



```
100%|      | 469/469 [00:13<00:00, 34.91it/s]
65%|      | 307/469 [00:09<00:04, 34.36it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

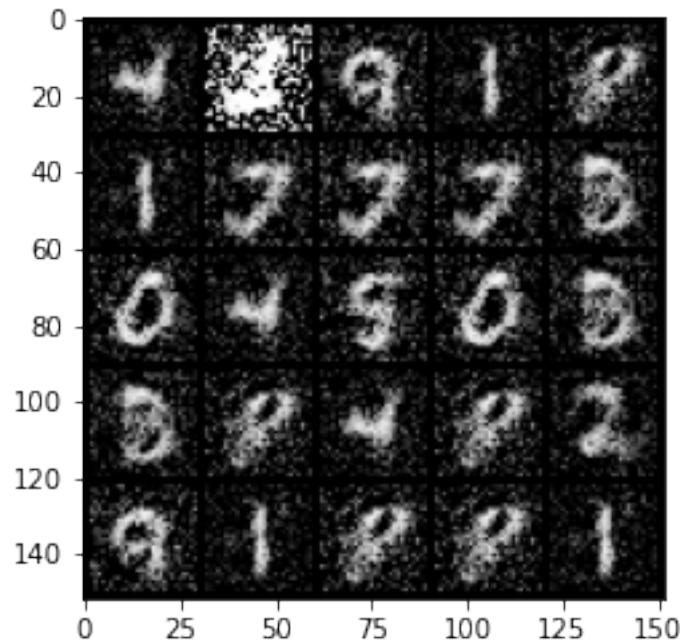
```
Epoch 139, step 65500 -> generator loss: 0.44857982856035244, discriminator
loss: 0.696258779168129
```

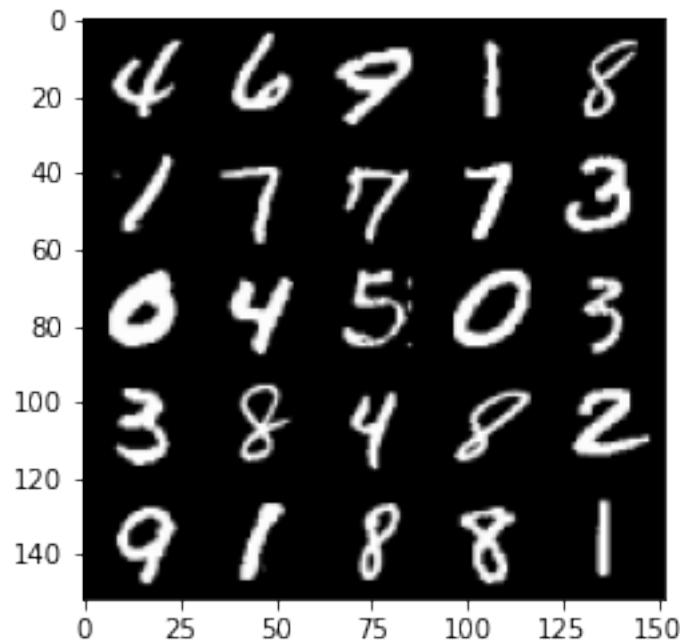




```
100% | 469/469 [00:14<00:00, 32.84it/s]
72% | 338/469 [00:10<00:03, 34.27it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

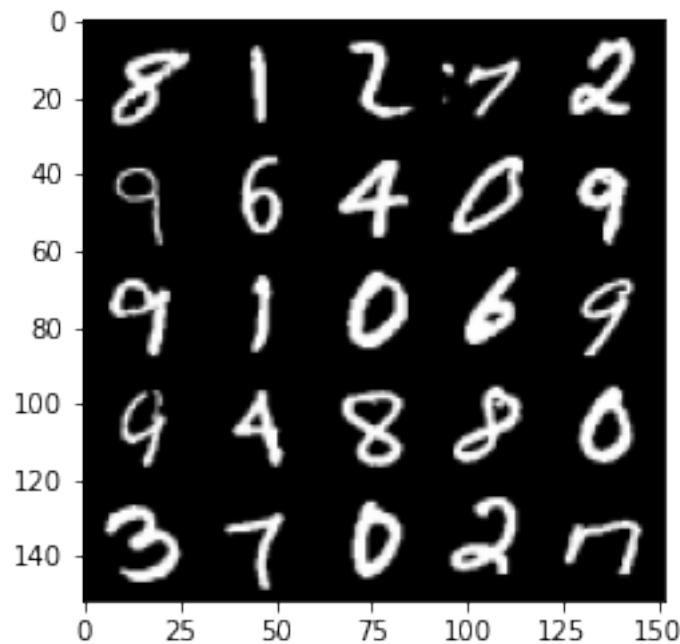
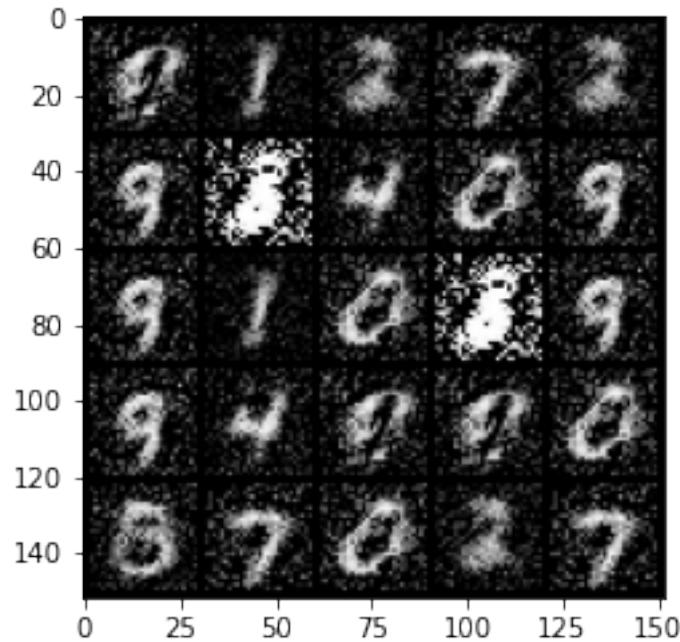
```
Epoch 140, step 66000 -> generator loss: 0.45310701578855545, discriminator
loss: 0.6944219676256183
```





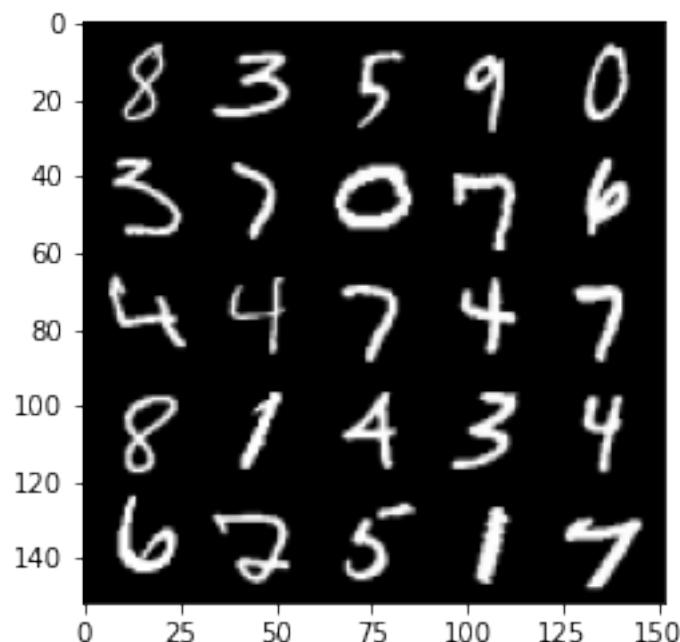
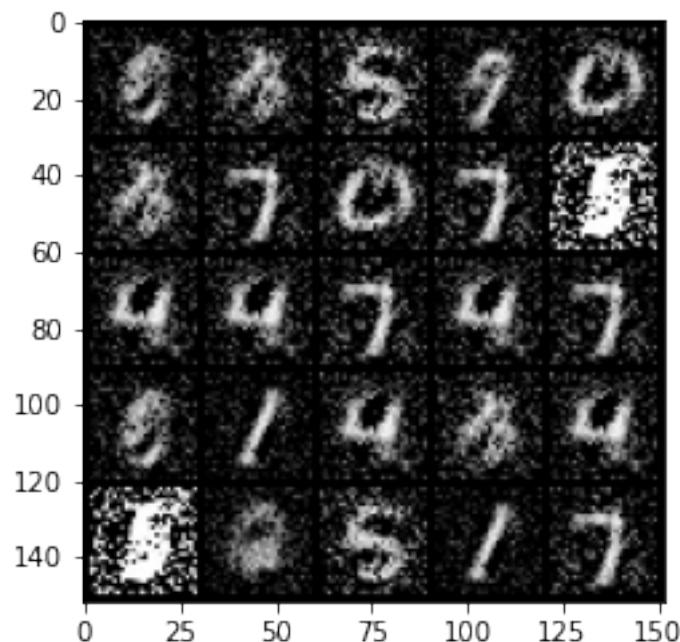
```
100% | 469/469 [00:14<00:00, 32.08it/s]
79% | 370/469 [00:12<00:02, 34.04it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 141, step 66500 -> generator loss: 0.45294436496496193, discriminator
loss: 0.6900702661275869
```



```
100%|      | 469/469 [00:15<00:00, 30.24it/s]
86%|      | 402/469 [00:12<00:02, 30.39it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

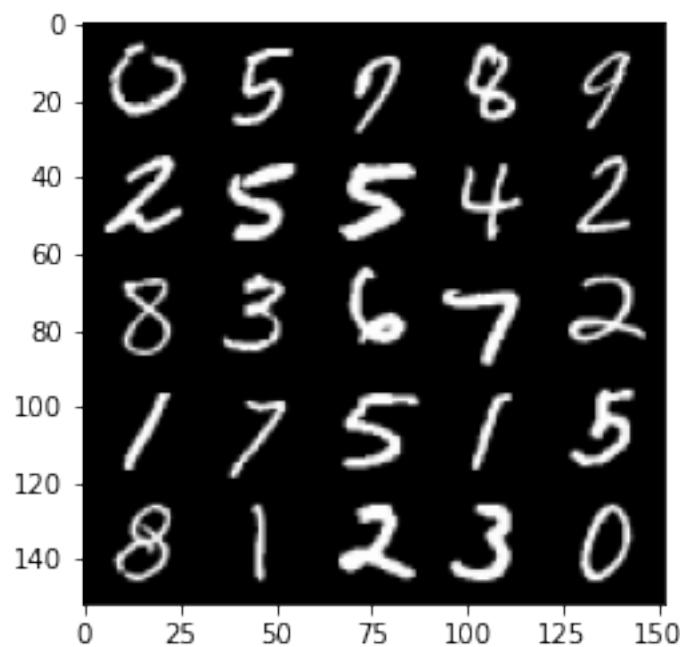
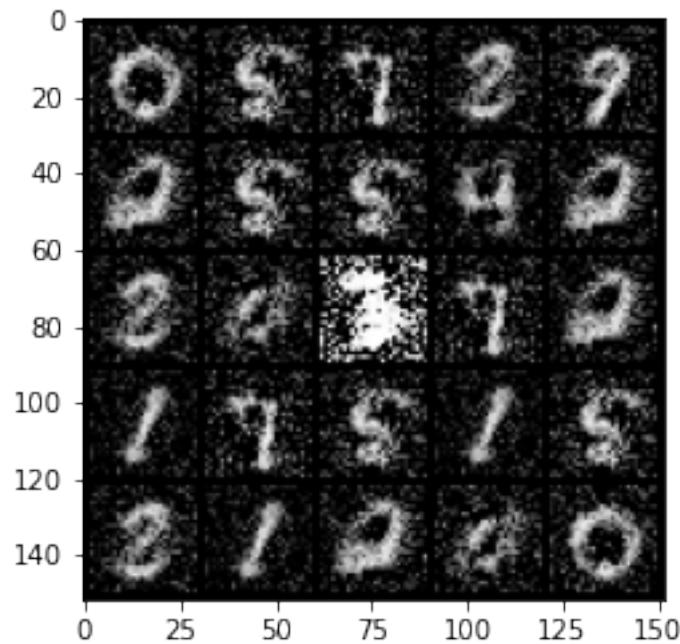
Epoch 142, step 67000 -> generator loss: 0.4485488218665118, discriminator loss: 0.6983207743167873



100% | 469/469 [00:15<00:00, 30.60it/s]

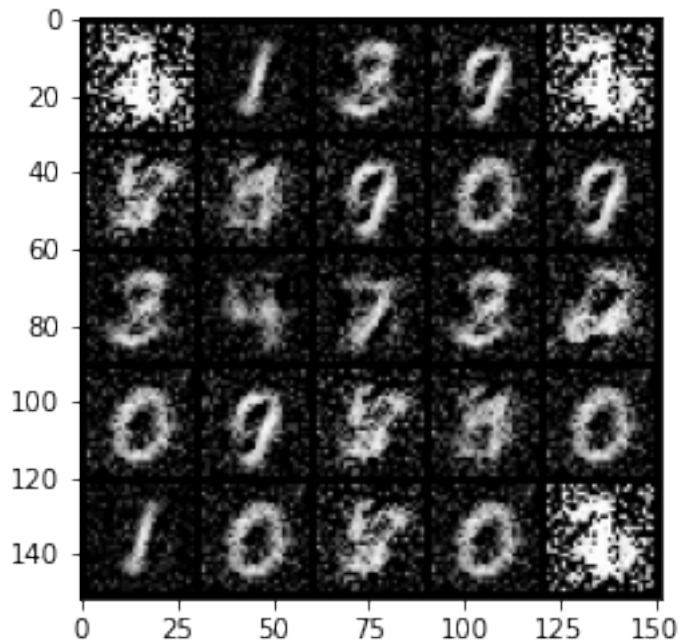
92%| 431/469 [00:14<00:01, 31.31it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

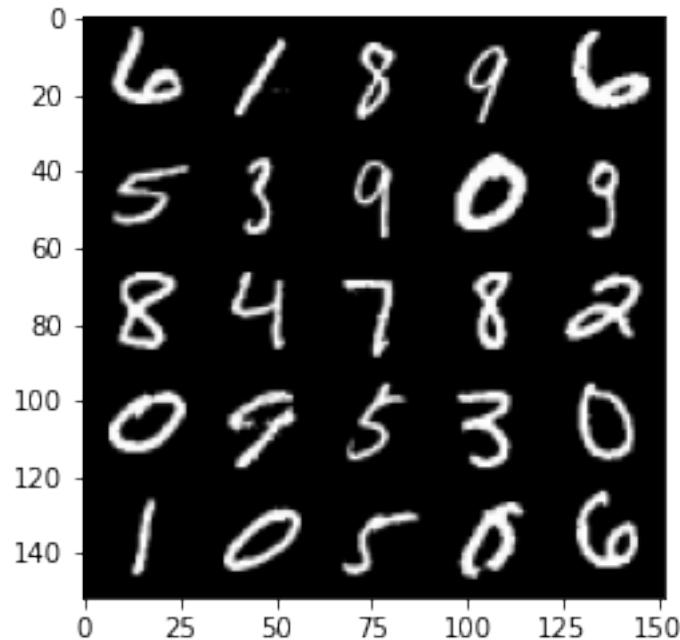
Epoch 143, step 67500 -> generator loss: 0.43635254400968526, discriminator loss: 0.7084618419408799



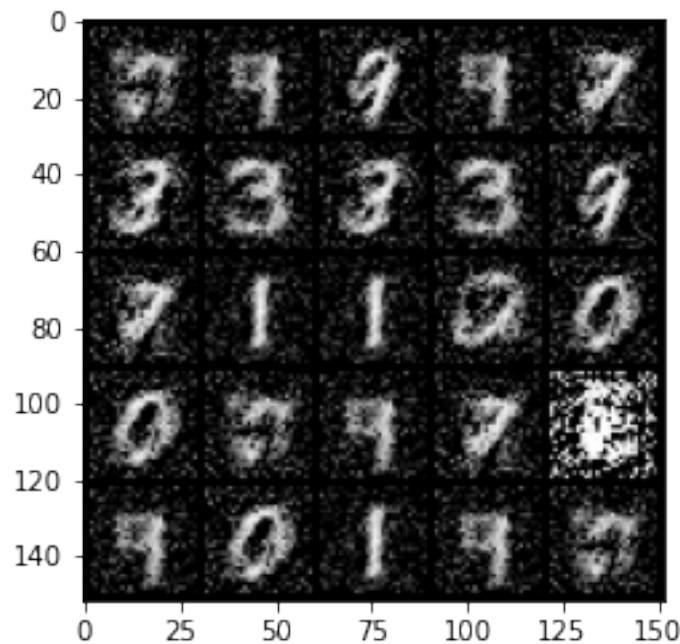
```
100%|    | 469/469 [00:15<00:00, 29.61it/s]
99%|    | 464/469 [00:13<00:00, 35.48it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

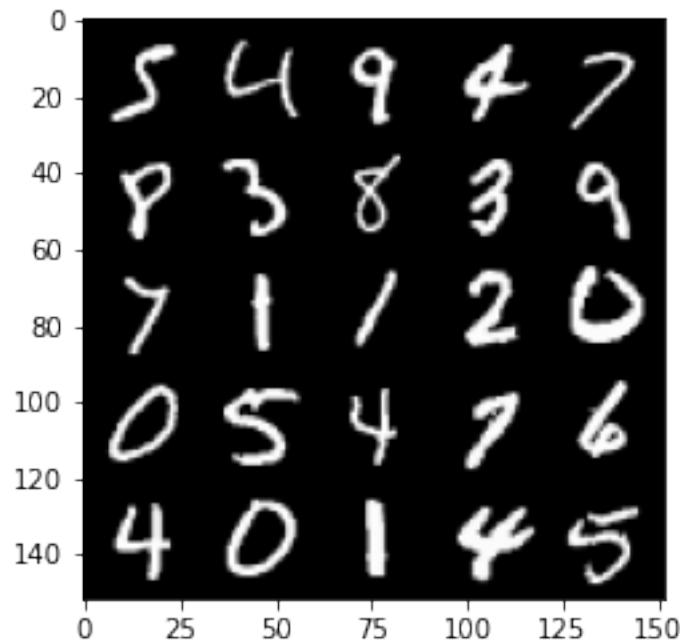
```
Epoch 144, step 68000 -> generator loss: 0.45473566448688546, discriminator
loss: 0.688207426548004
```





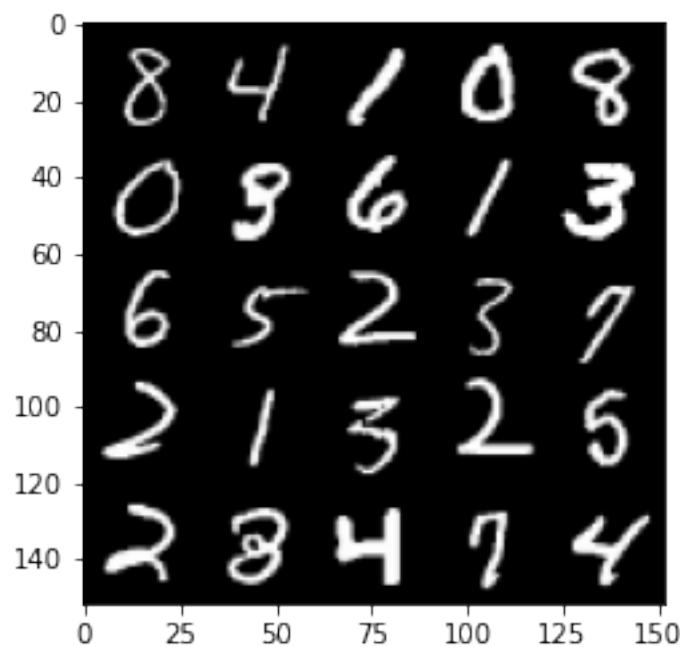
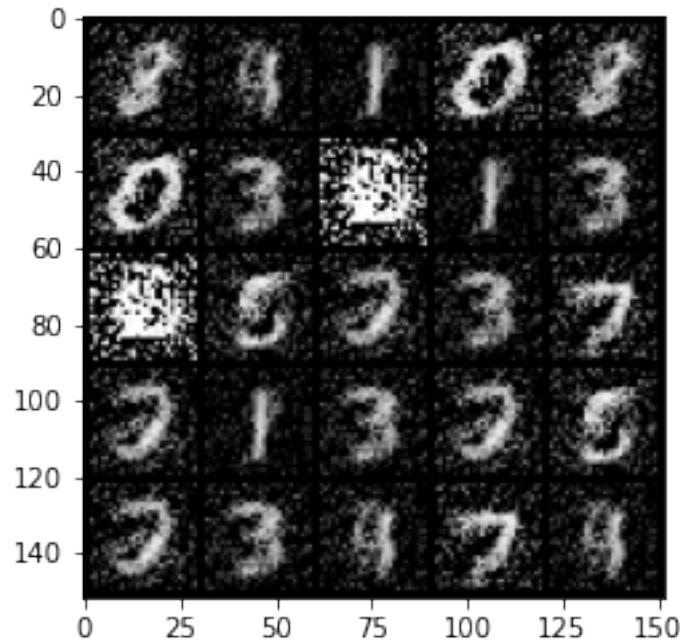
```
100%| 469/469 [00:14<00:00, 33.23it/s]
100%| 469/469 [00:15<00:00, 30.25it/s]
 5%| 24/469 [00:00<00:14, 31.75it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 146, step 68500 -> generator loss: 0.45257948982715546, discriminator
loss: 0.6930397931337359
```





```
100% | 469/469 [00:14<00:00, 31.66it/s]
12% | 54/469 [00:01<00:11, 35.70it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

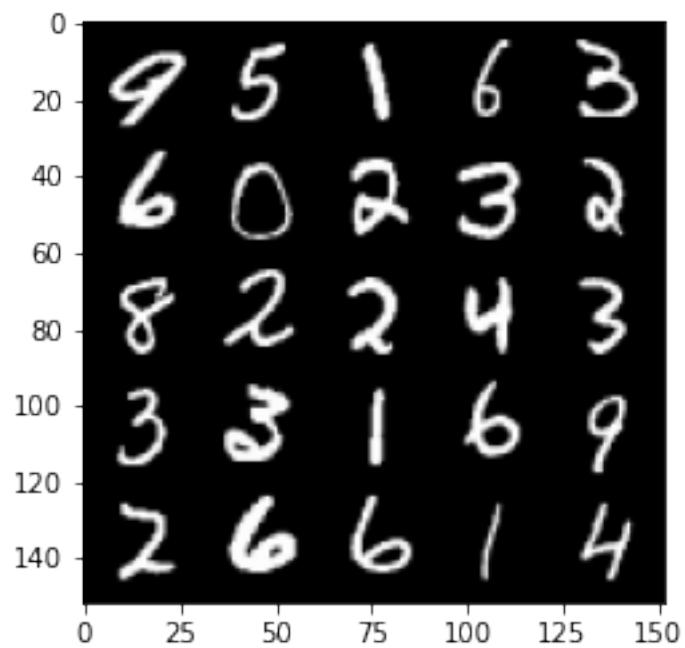
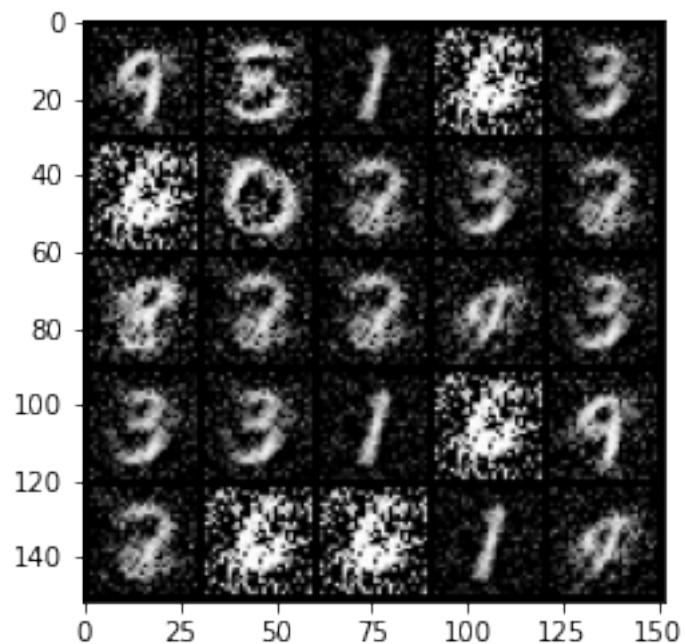
```
Epoch 147, step 69000 -> generator loss: 0.4589269901514049, discriminator loss:
0.6824127331972117
```



100% | 469/469 [00:13<00:00, 34.14it/s]  
19% | 88/469 [00:02<00:12, 31.71it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 148, step 69500 -> generator loss: 0.44710888642072677, discriminator

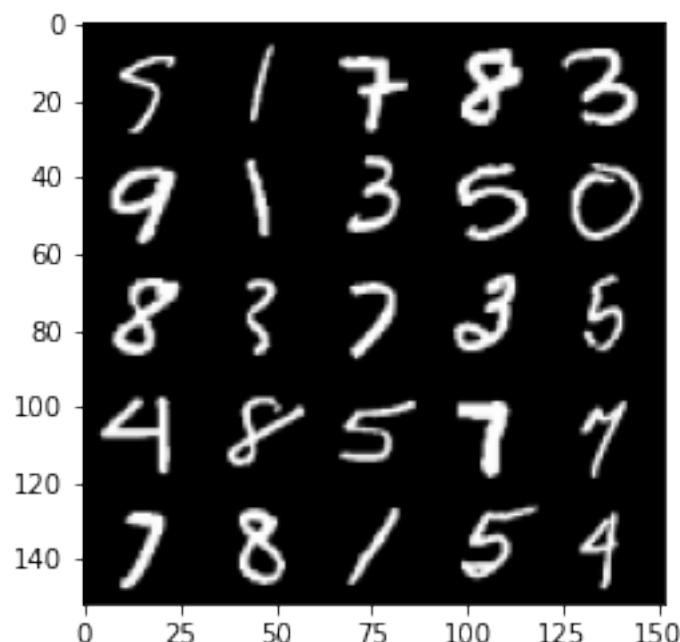
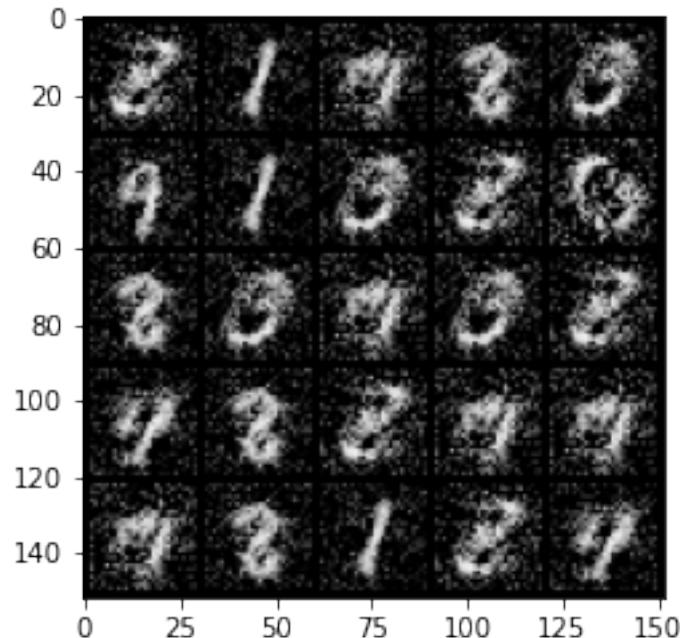
loss: 0.701628547430039



100% | 469/469 [00:15<00:00, 29.73it/s]  
25% | 119/469 [00:03<00:11, 30.92it/s] Clipping input data to the

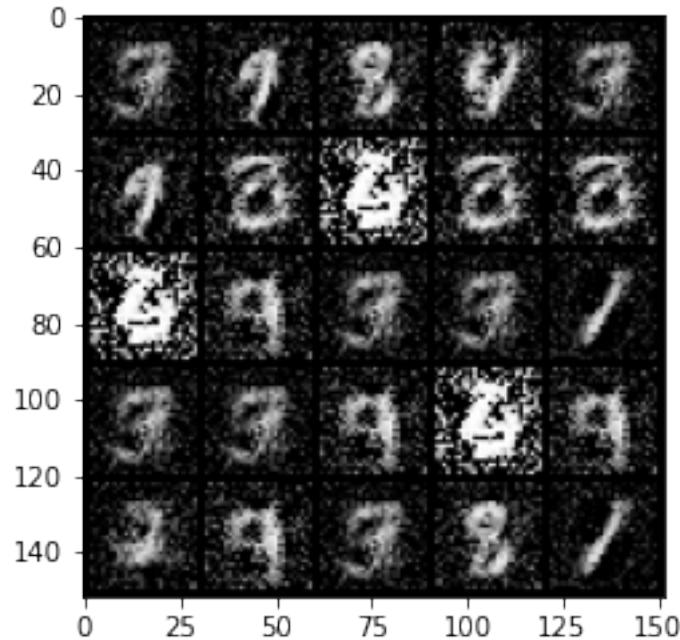
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

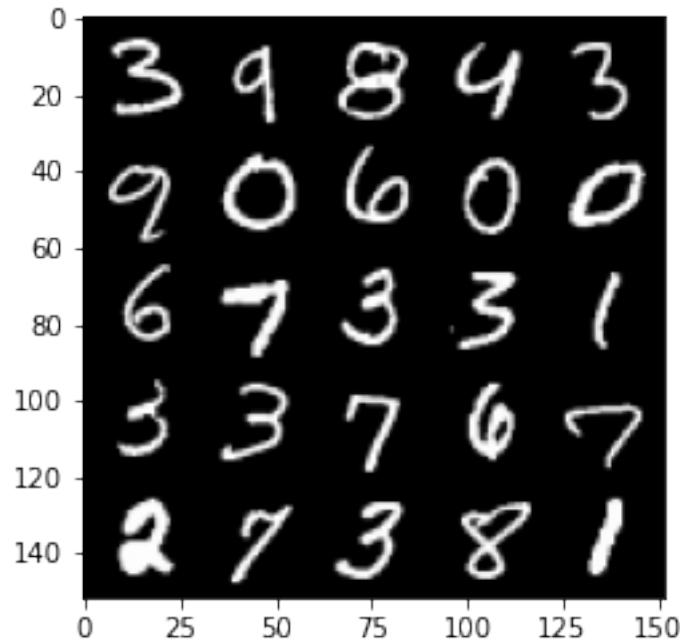
Epoch 149, step 70000 -> generator loss: 0.4462225713133808, discriminator loss: 0.701891492247581



```
100%|      | 469/469 [00:16<00:00, 28.04it/s]
32%|      | 150/469 [00:05<00:09, 34.25it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

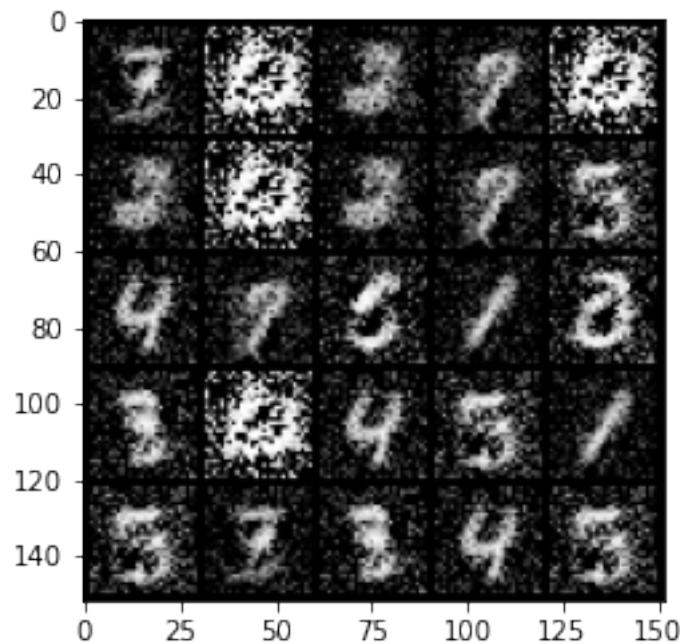
Epoch 150, step 70500 -> generator loss: 0.44714044368267075, discriminator loss: 0.6966931940317154

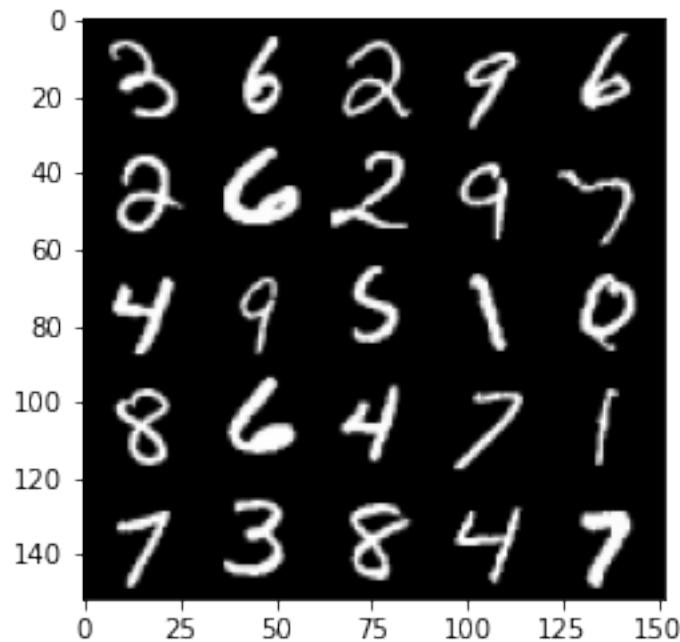




```
100% | 469/469 [00:15<00:00, 29.51it/s]
38% | 179/469 [00:05<00:09, 29.96it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

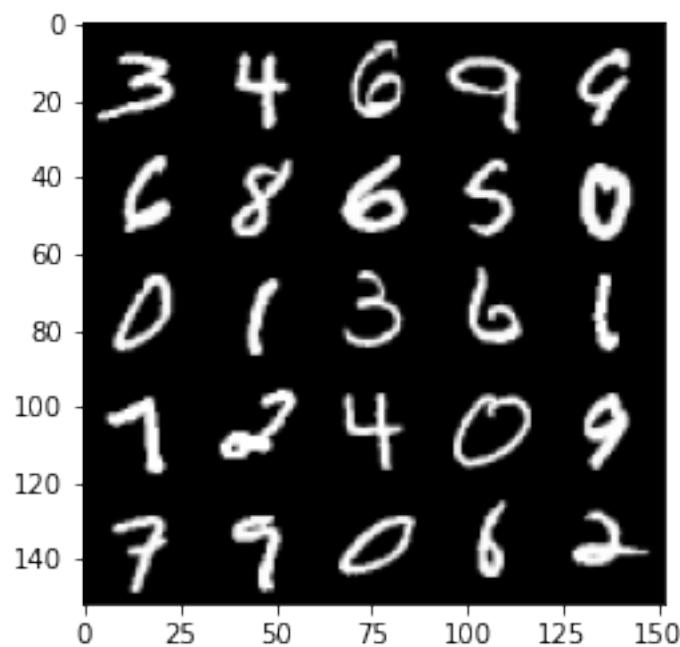
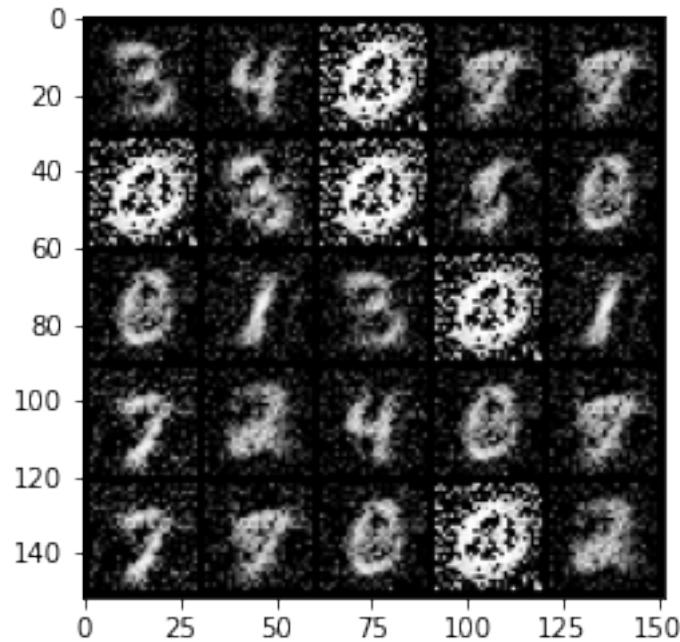
```
Epoch 151, step 71000 -> generator loss: 0.4461988569498062, discriminator loss:
0.7008447226285939
```





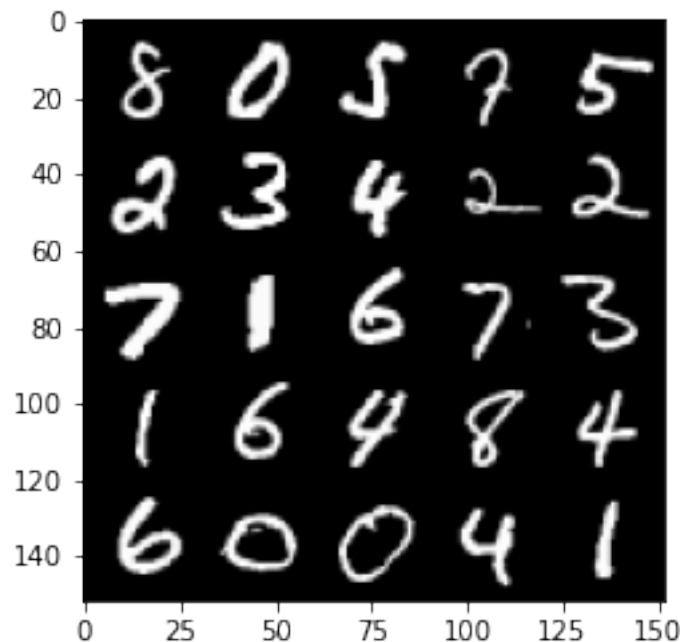
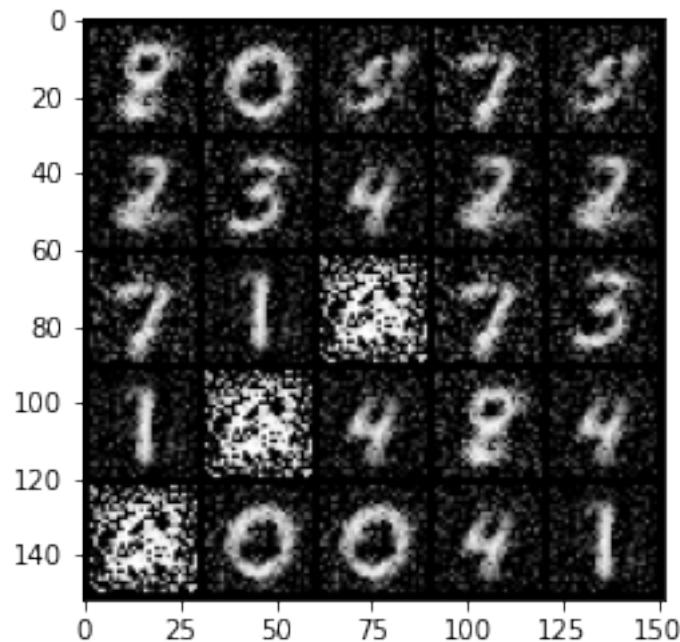
```
100% | 469/469 [00:17<00:00, 26.65it/s]
45% | 209/469 [00:07<00:08, 30.26it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 152, step 71500 -> generator loss: 0.4585004748702052, discriminator loss:
0.6748503903150557
```



```
100%|      | 469/469 [00:16<00:00, 27.86it/s]
51%|      | 241/469 [00:07<00:06, 33.78it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

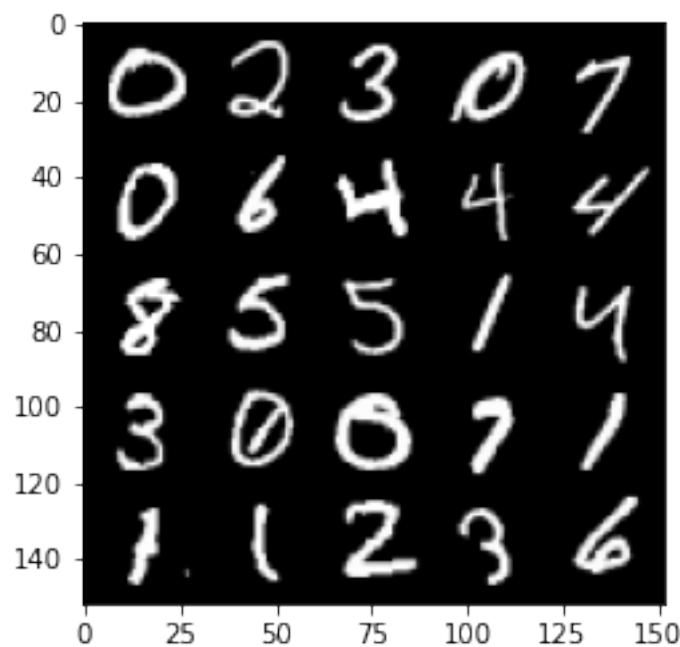
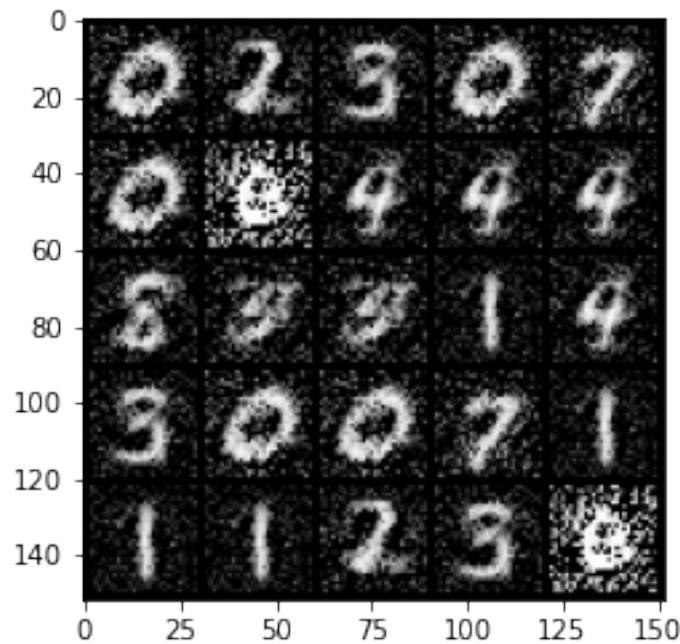
Epoch 153, step 72000 → generator loss: 0.44491034686565417, discriminator loss: 0.7027722548246387



100% | 469/469 [00:15<00:00, 31.06it/s]

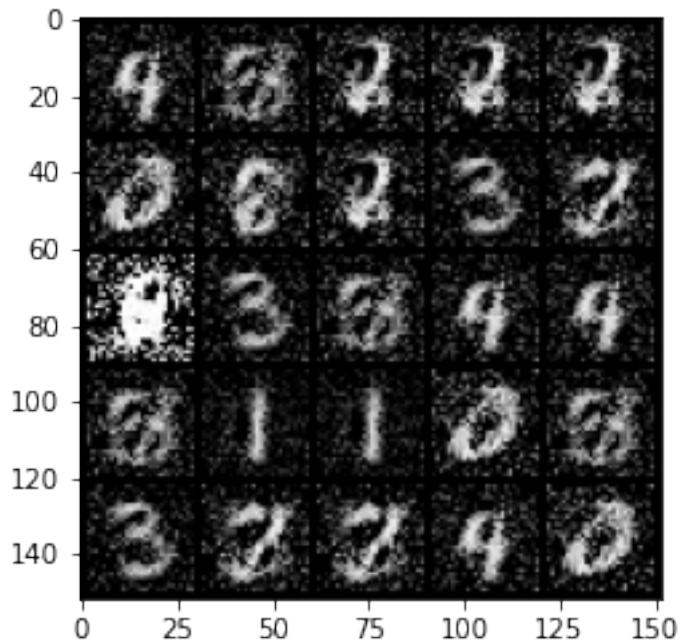
58%| 273/469 [00:08<00:08, 23.85it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

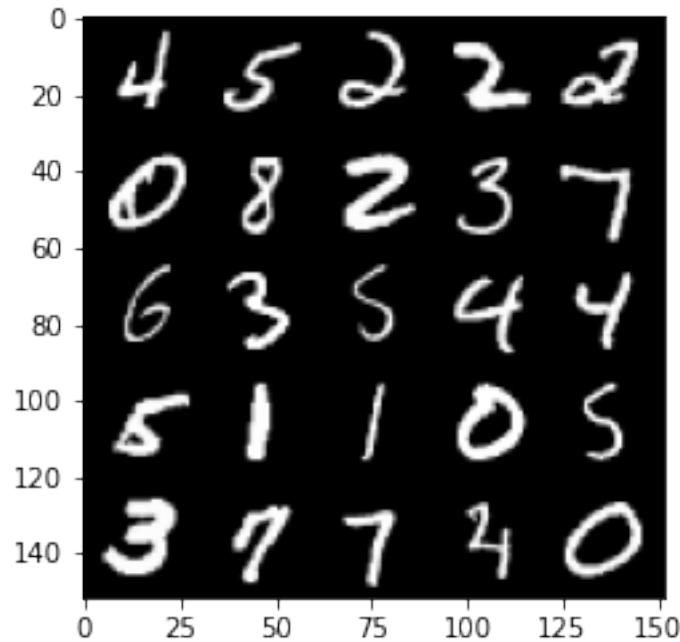
Epoch 154, step 72500 -> generator loss: 0.43829865837097165, discriminator loss: 0.716979929089546



```
100%|      | 469/469 [00:17<00:00, 27.08it/s]
65%|      | 305/469 [00:11<00:05, 29.54it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

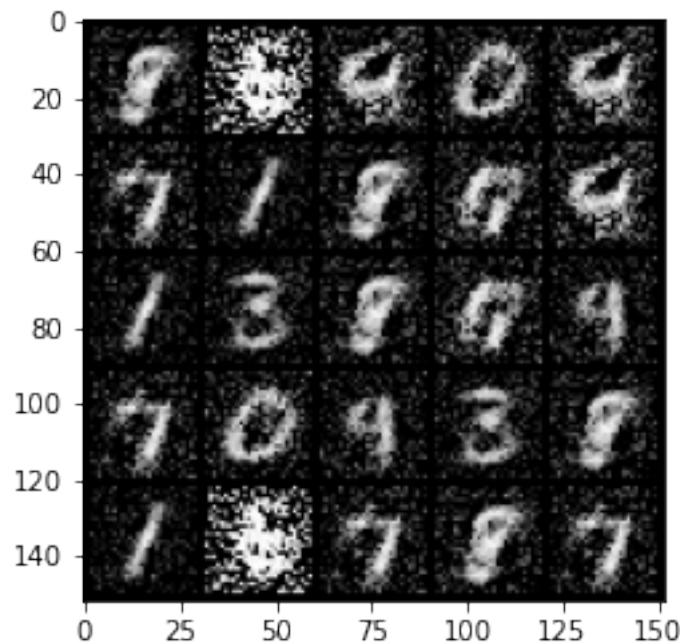
Epoch 155, step 73000 -> generator loss: 0.45631333225965465, discriminator loss: 0.6883443408012391

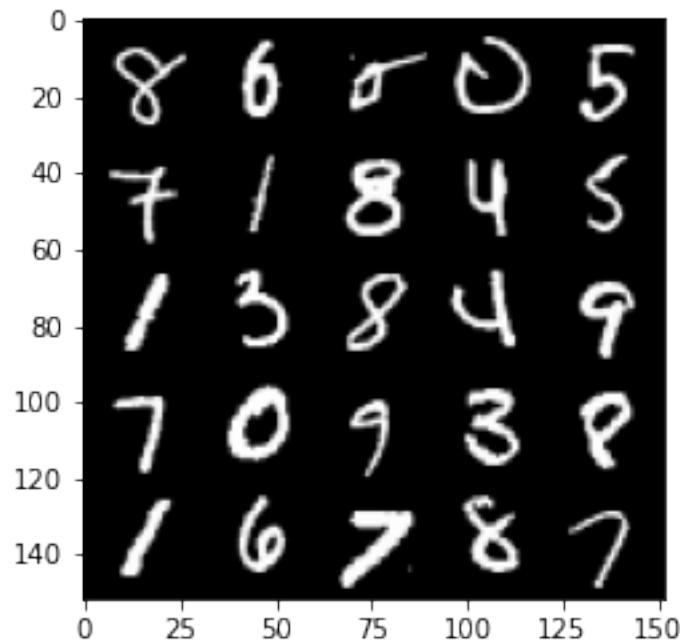




```
100%|      | 469/469 [00:16<00:00, 28.07it/s]
71%|      | 334/469 [00:09<00:04, 30.65it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

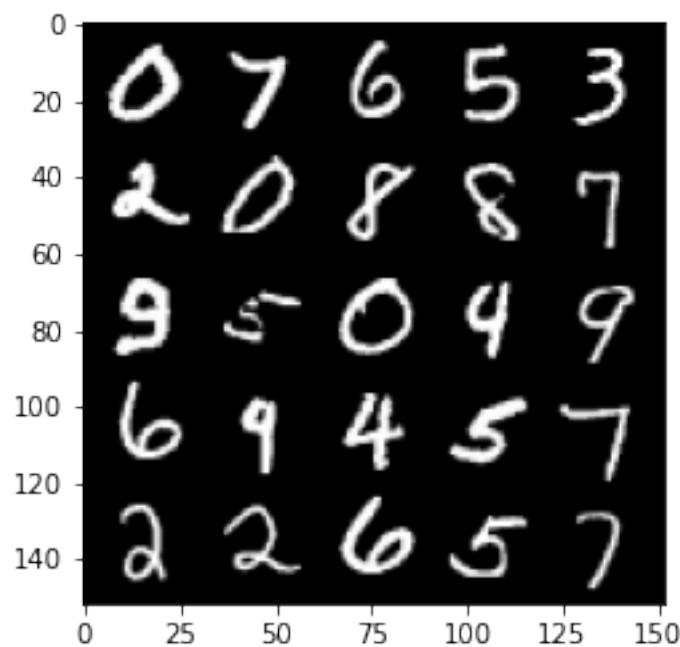
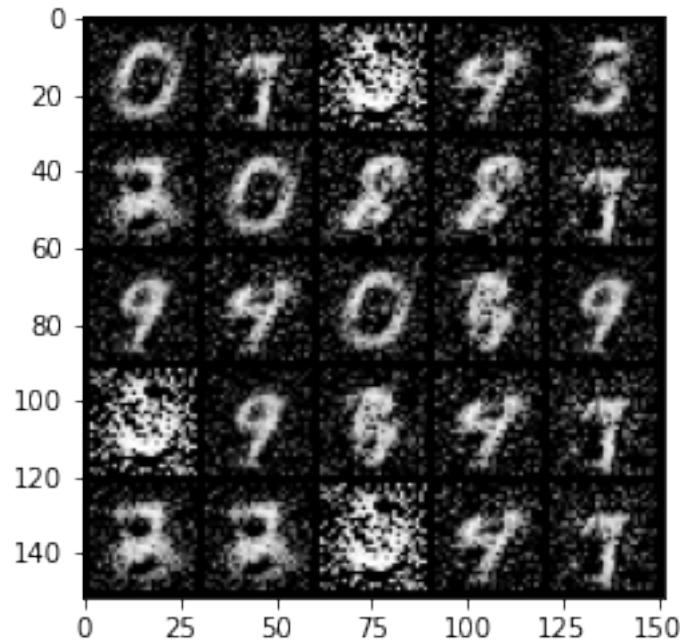
Epoch 156, step 73500 -> generator loss: 0.4613018882274626, discriminator loss:  
0.6743746383190162





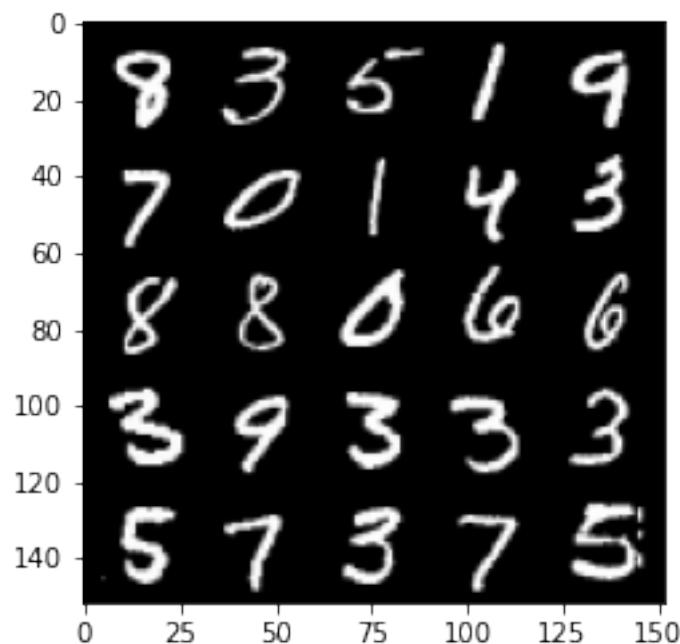
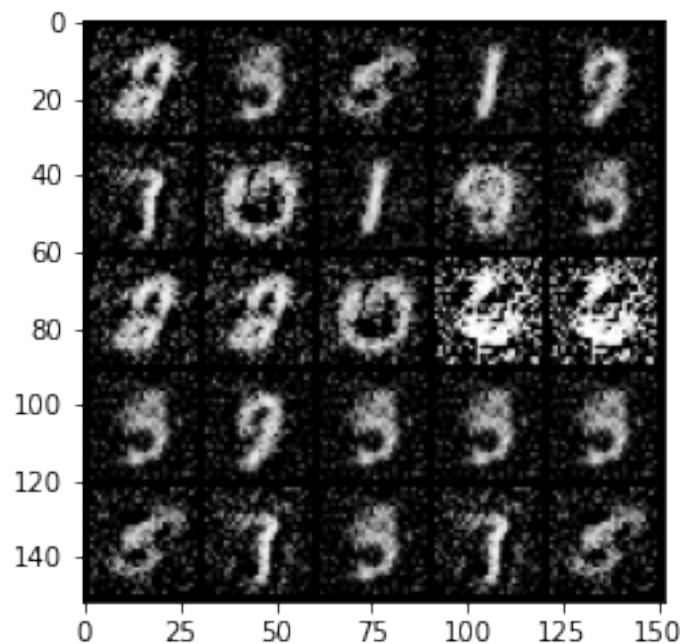
```
100% | 469/469 [00:14<00:00, 32.56it/s]
78% | 365/469 [00:11<00:03, 33.17it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 157, step 74000 -> generator loss: 0.4465354697108271, discriminator loss:
0.6972305129766464
```



```
100%|     | 469/469 [00:14<00:00, 32.19it/s]
84%|     | 395/469 [00:11<00:02, 33.56it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

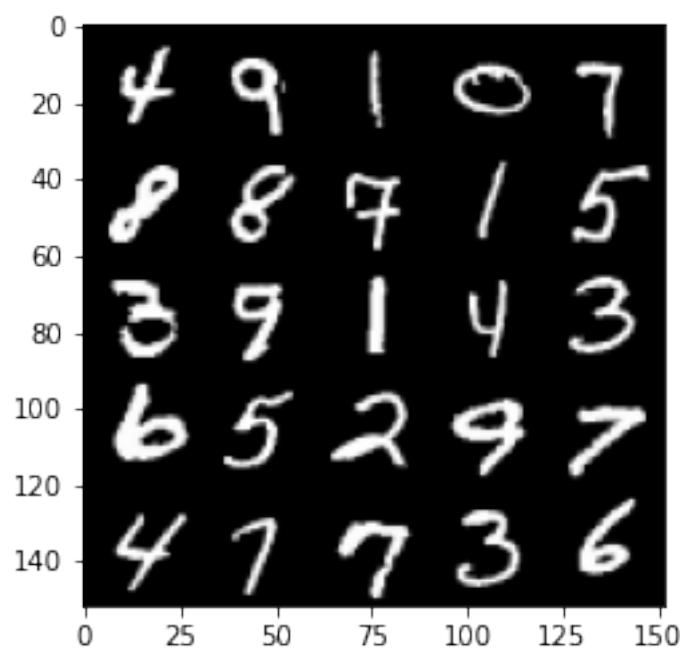
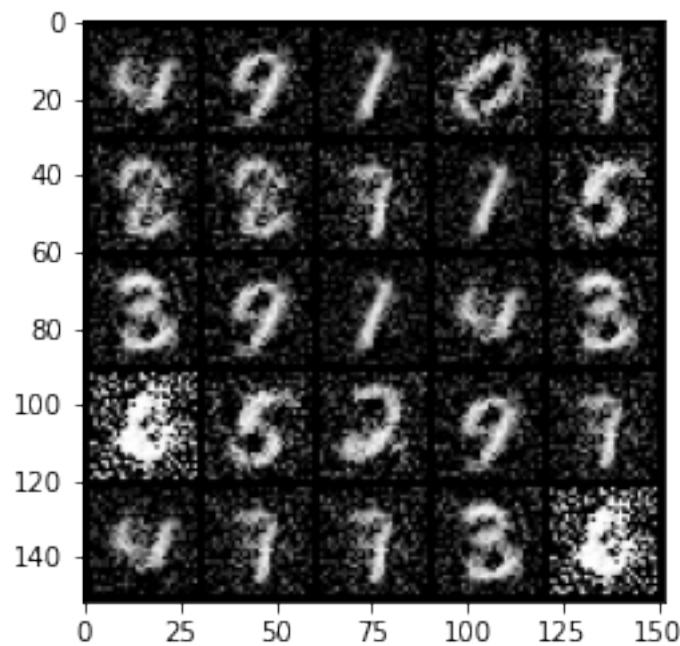
Epoch 158, step 74500 → generator loss: 0.44856583249568915, discriminator loss: 0.7001416978836059



100% | 469/469 [00:14<00:00, 32.58it/s]

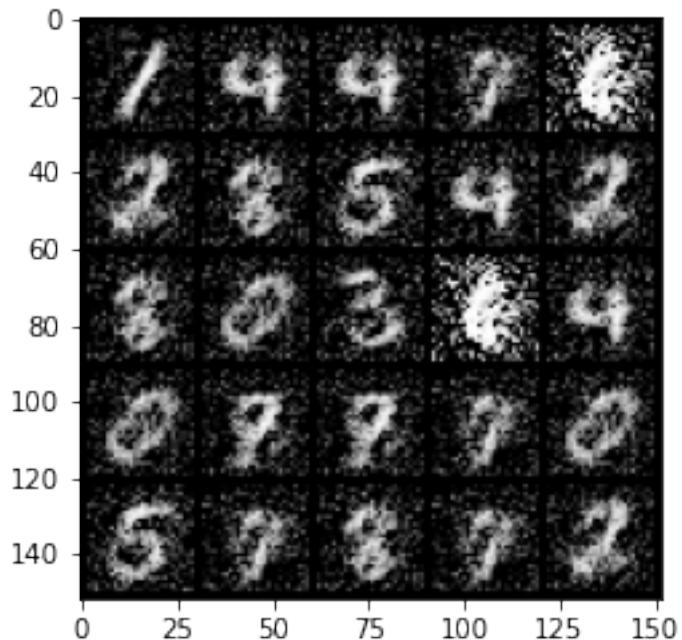
91%| 429/469 [00:12<00:01, 33.97it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

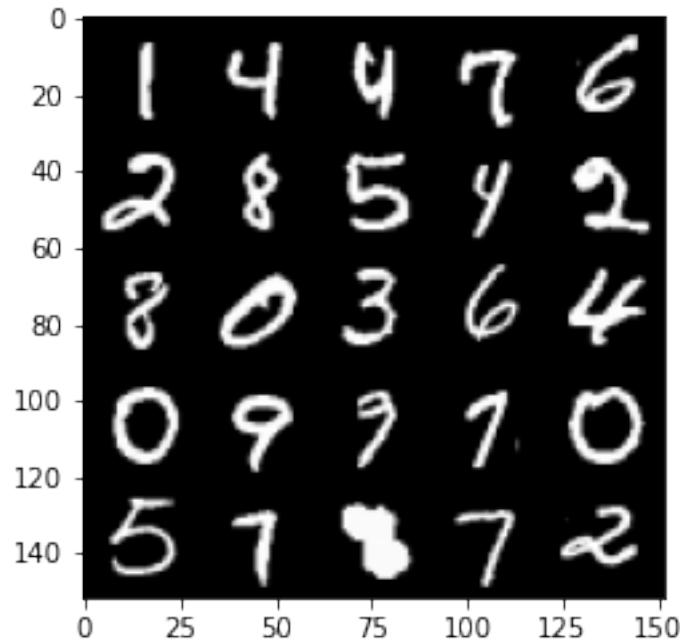
Epoch 159, step 75000 -> generator loss: 0.44274692988395736, discriminator loss: 0.7120444074869147



```
100%|     | 469/469 [00:14<00:00, 32.57it/s]
97%|     | 457/469 [00:13<00:00, 33.26it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

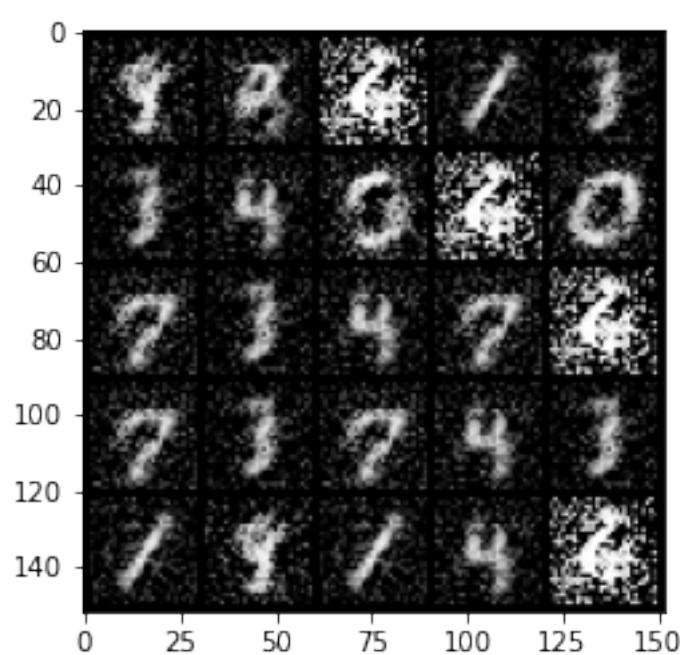
```
Epoch 160, step 75500 -> generator loss: 0.45206085884571057, discriminator
loss: 0.6929967557191847
```

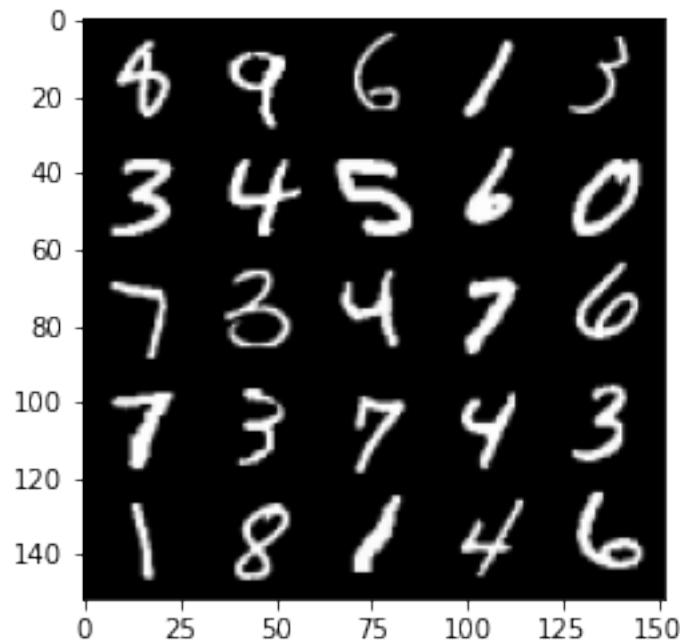




```
100%|   | 469/469 [00:14<00:00, 32.57it/s]
100%|   | 469/469 [00:13<00:00, 33.82it/s]
  4%|   | 20/469 [00:00<00:13, 33.25it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

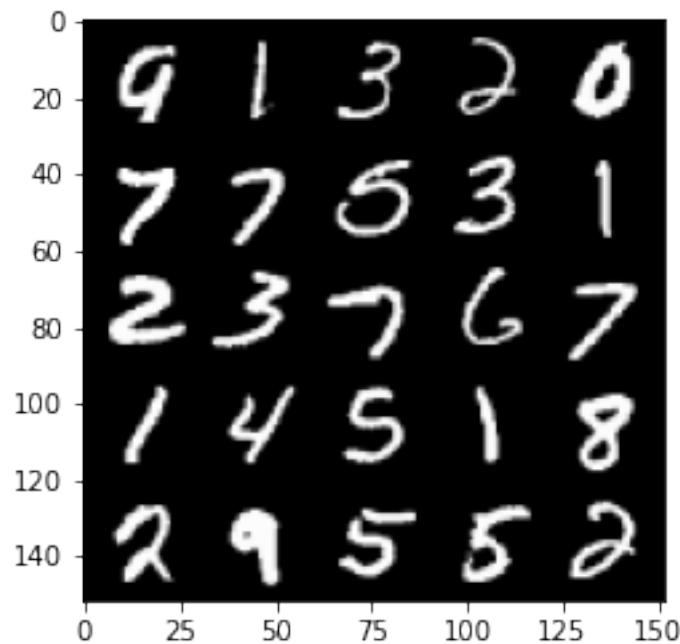
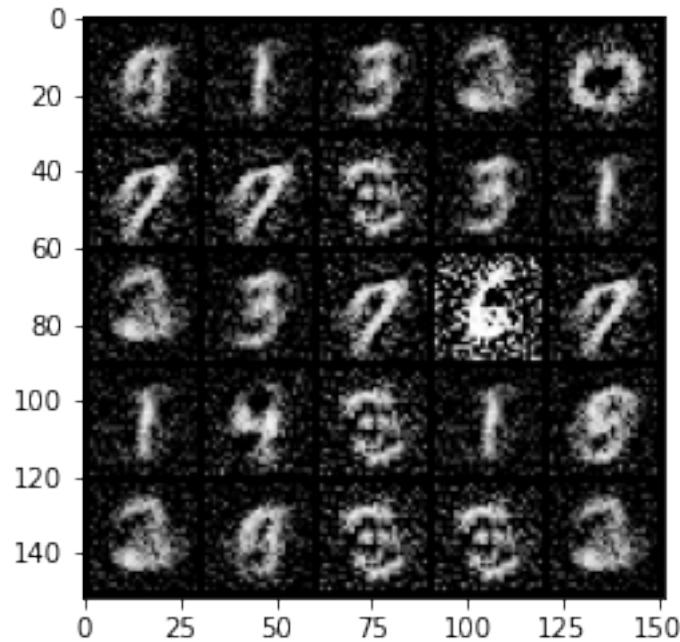
```
Epoch 162, step 76000 -> generator loss: 0.44862840527296094, discriminator
loss: 0.6951631393432617
```





```
100% | 469/469 [00:14<00:00, 32.71it/s]
11% | 50/469 [00:01<00:12, 33.77it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

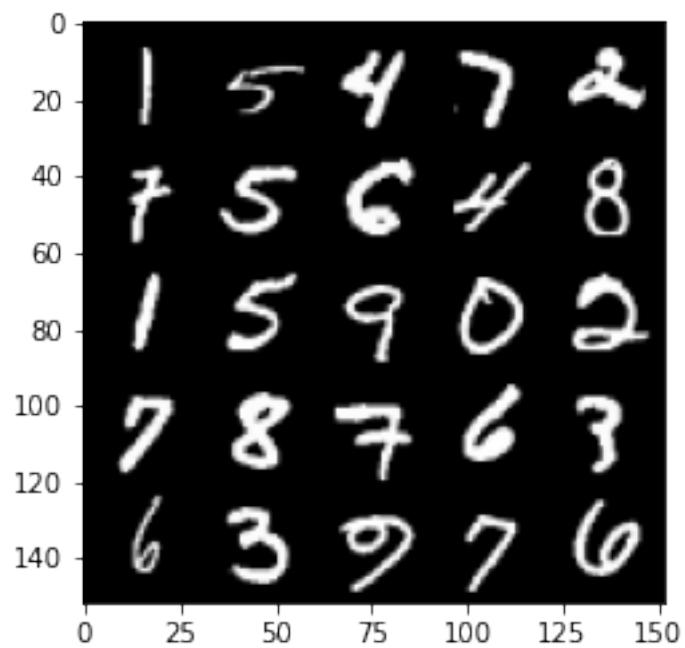
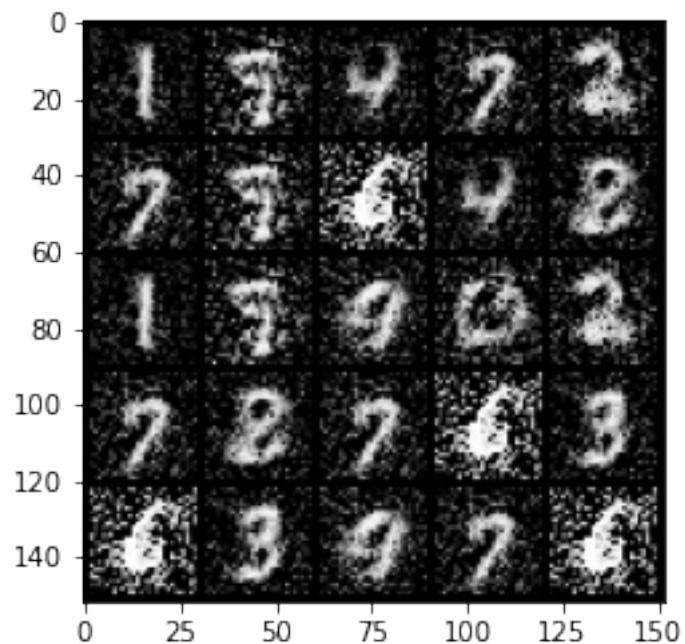
```
Epoch 163, step 76500 -> generator loss: 0.4485102739930154, discriminator loss:
0.6976825277805334
```



```
100%| 469/469 [00:14<00:00, 32.29it/s]
18%| 83/469 [00:02<00:11, 32.62it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 164, step 77000 -> generator loss: 0.4476419530510902, discriminator loss:

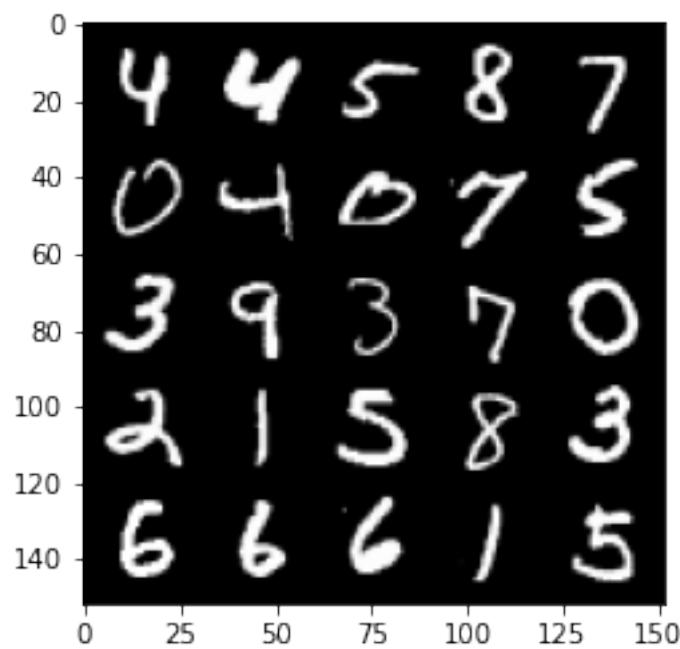
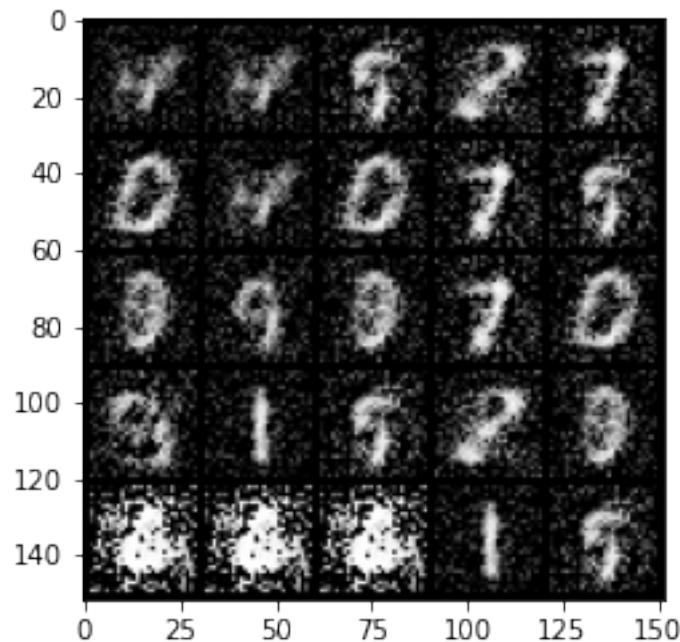
0.697037196278571



100% | 469/469 [00:14<00:00, 31.44it/s]  
24% | 112/469 [00:03<00:11, 32.07it/s] Clipping input data to the

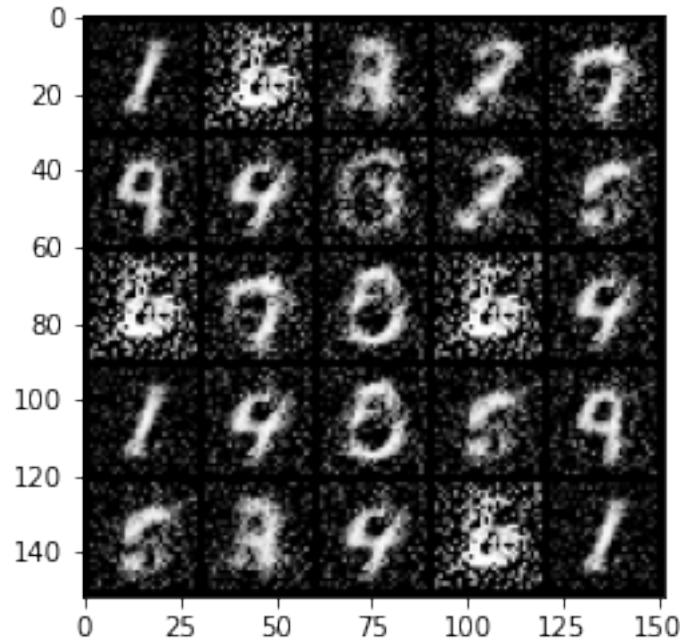
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

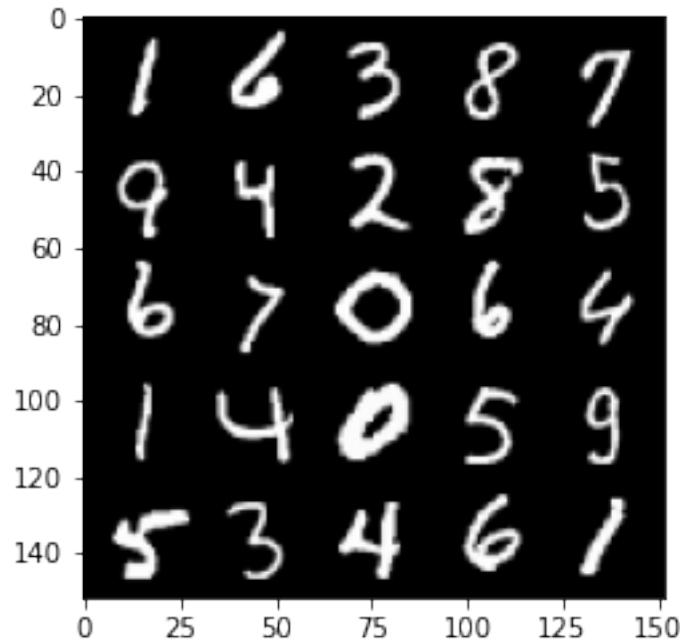
Epoch 165, step 77500 -> generator loss: 0.45034298169612924, discriminator loss: 0.6952975282669066



```
100%|    | 469/469 [00:14<00:00, 32.41it/s]
31%|    | 146/469 [00:04<00:09, 34.98it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

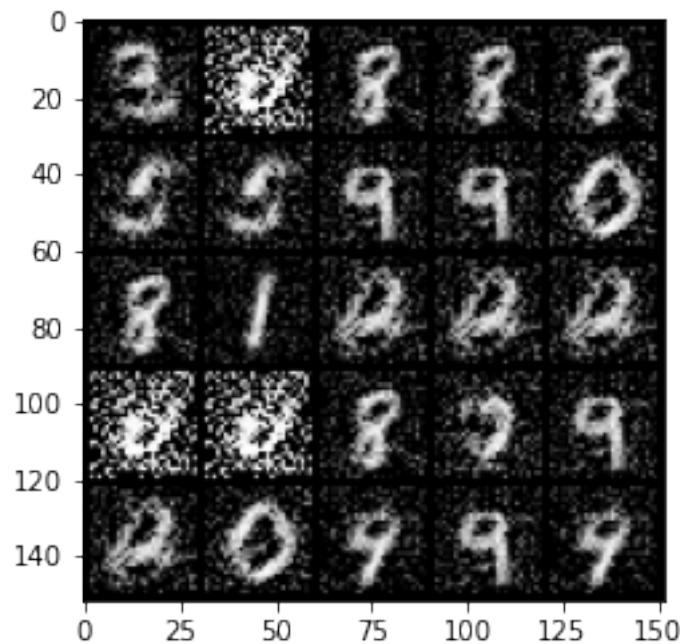
Epoch 166, step 78000 -> generator loss: 0.45230785626173053, discriminator  
loss: 0.6973175606727597

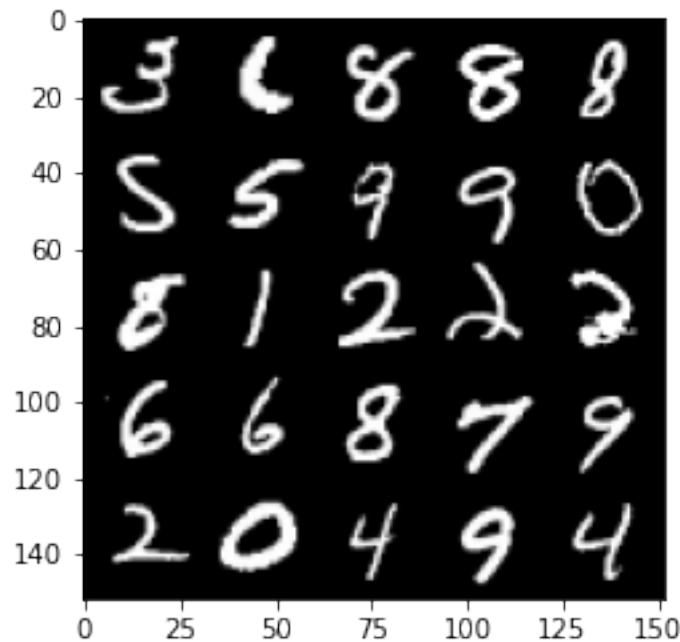




```
100% | 469/469 [00:14<00:00, 32.19it/s]
38% | 177/469 [00:05<00:08, 34.08it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

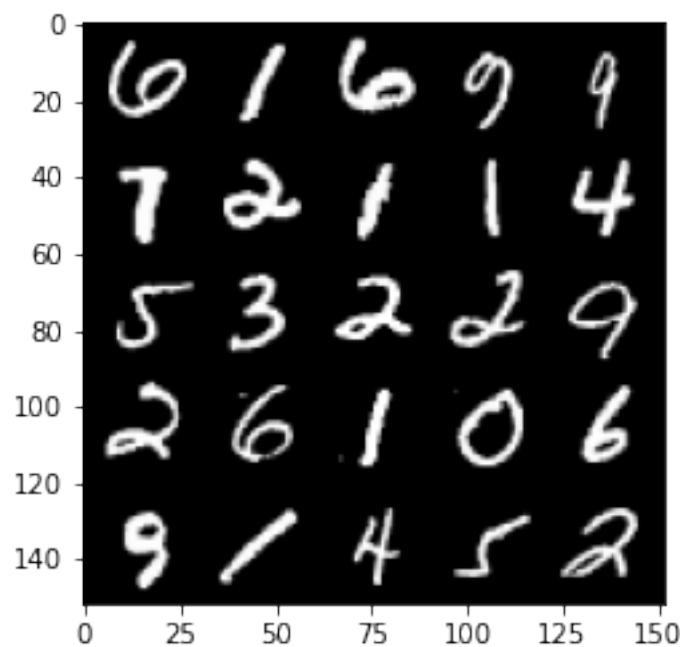
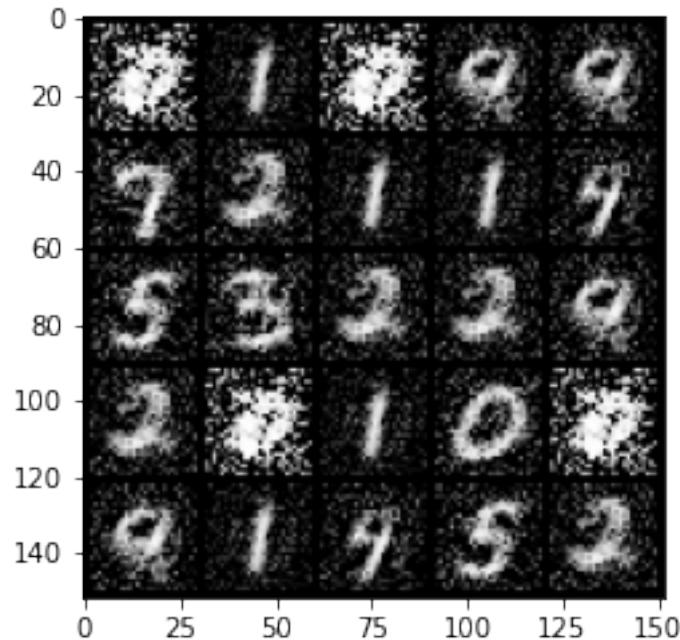
```
Epoch 167, step 78500 -> generator loss: 0.4481139827966693, discriminator loss:
0.7010673686265932
```





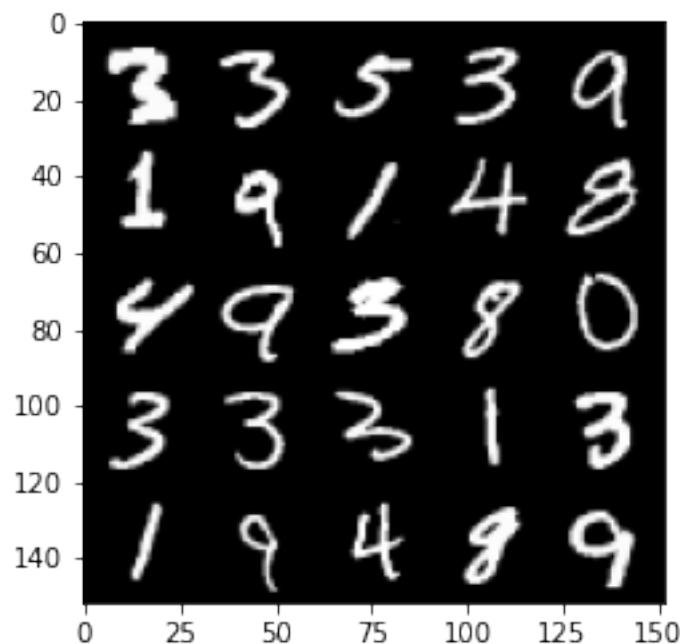
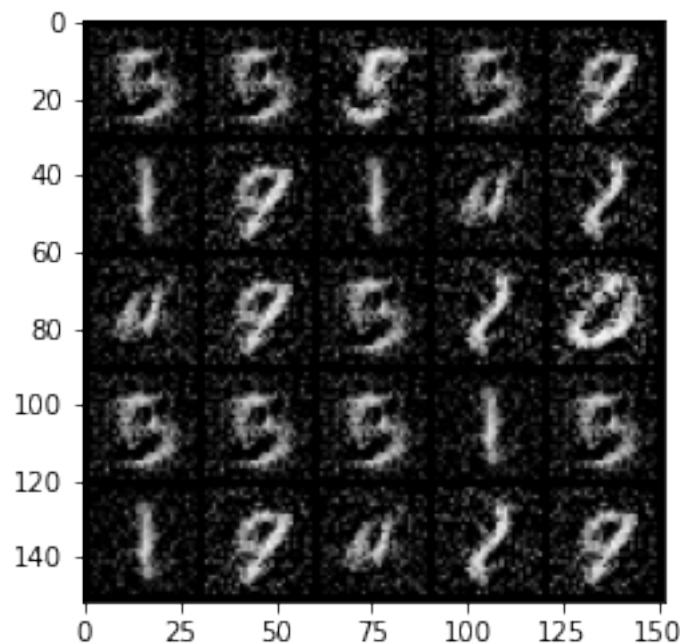
```
100% | 469/469 [00:14<00:00, 32.80it/s]
44% | 207/469 [00:06<00:07, 33.54it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 168, step 79000 -> generator loss: 0.44913517534732816, discriminator loss: 0.6984205759763724



```
100%|      | 469/469 [00:14<00:00, 32.67it/s]
51%|      | 238/469 [00:07<00:06, 34.13it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

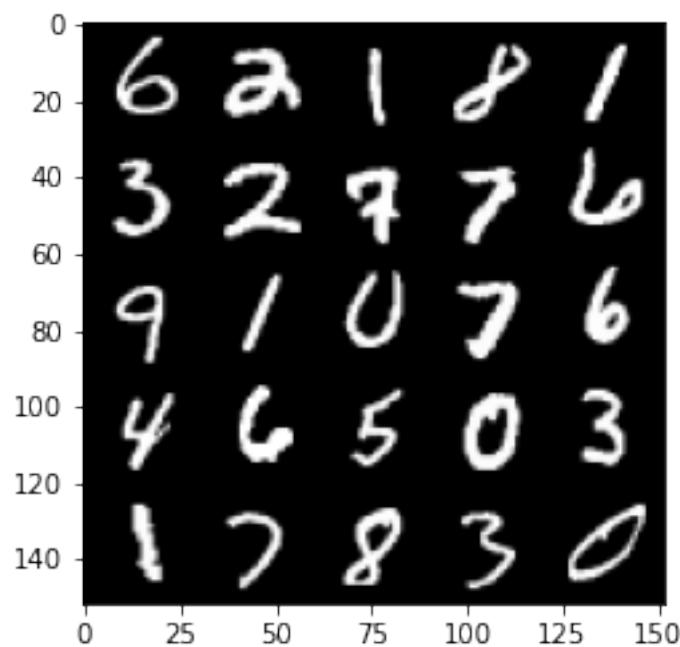
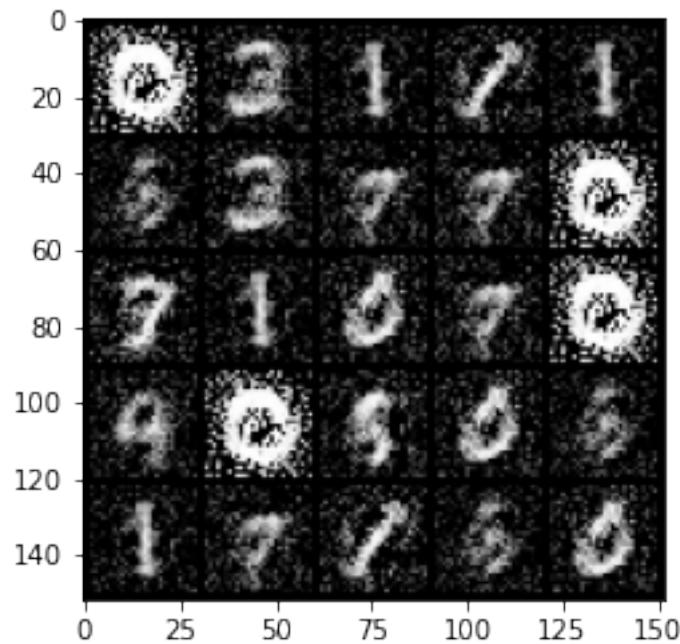
Epoch 169, step 79500 -> generator loss: 0.4456475334167479, discriminator loss: 0.698184733748435



100% | 469/469 [00:14<00:00, 32.54it/s]

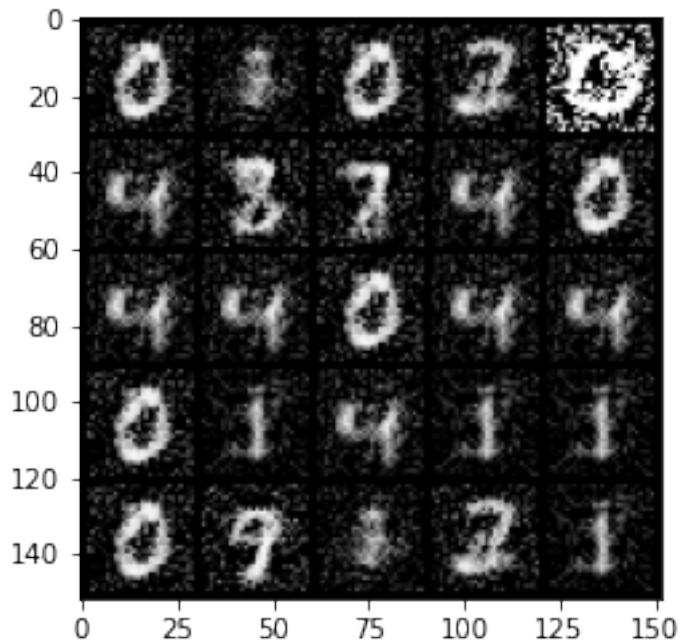
58%| 270/469 [00:08<00:05, 33.88it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

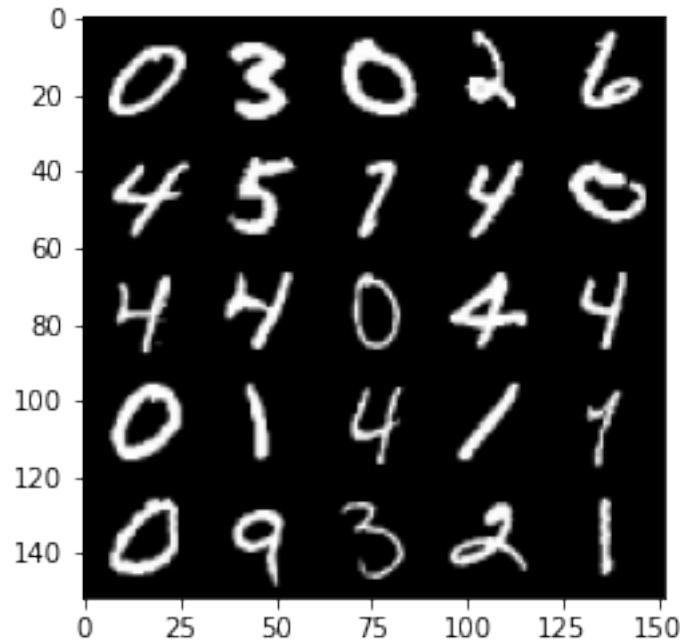
Epoch 170, step 80000 -> generator loss: 0.45387240833044096, discriminator loss: 0.6825853596925738



```
100%|      | 469/469 [00:14<00:00, 32.46it/s]
64%|      | 301/469 [00:09<00:04, 34.41it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

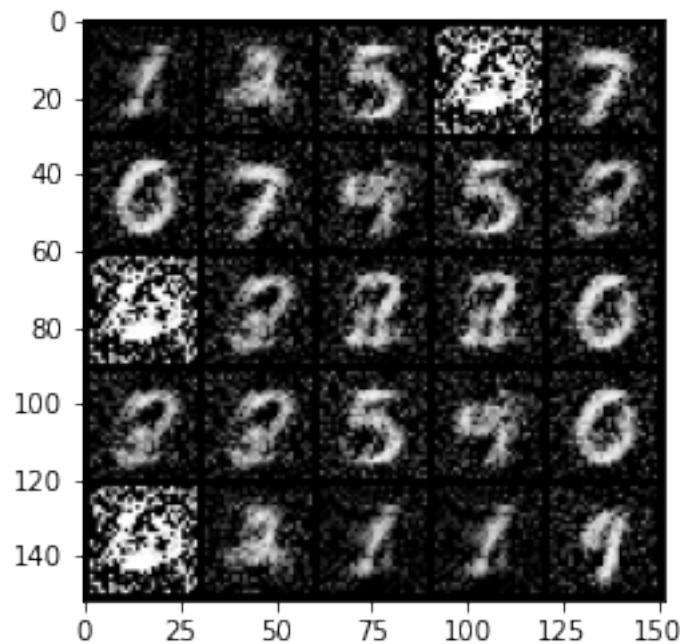
Epoch 171, step 80500 -> generator loss: 0.450994329988956, discriminator loss: 0.6939056460857396

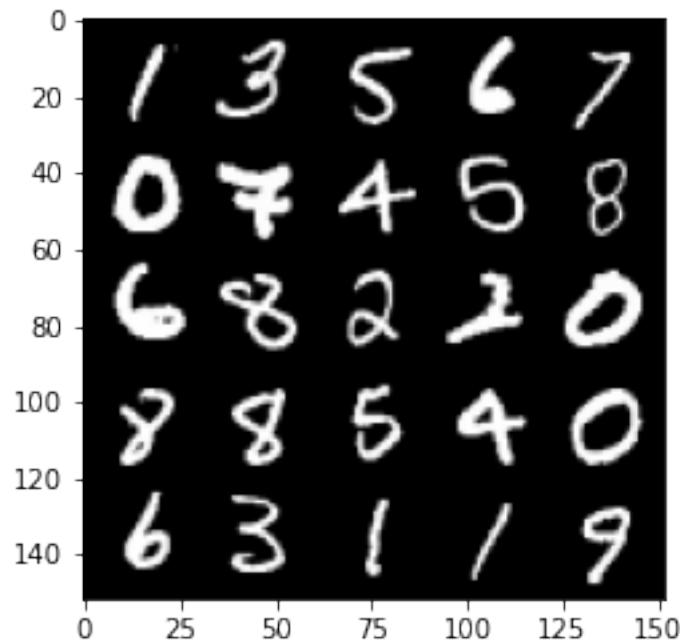




```
100%|      | 469/469 [00:14<00:00, 32.26it/s]
71%|      | 331/469 [00:09<00:04, 33.71it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

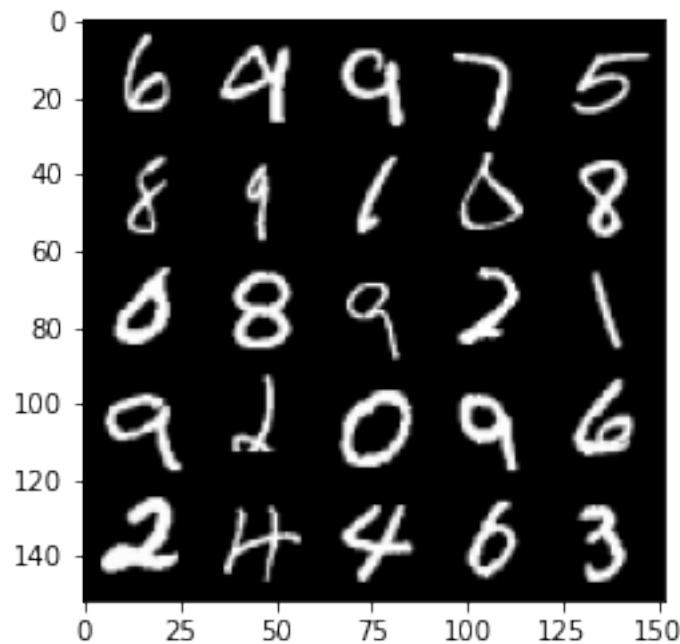
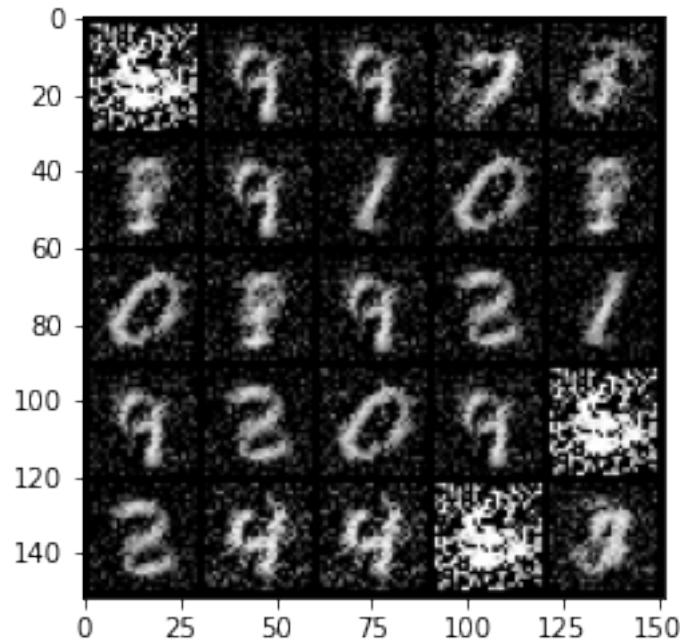
```
Epoch 172, step 81000 -> generator loss: 0.4607048948407171, discriminator loss:
0.6873058799505234
```





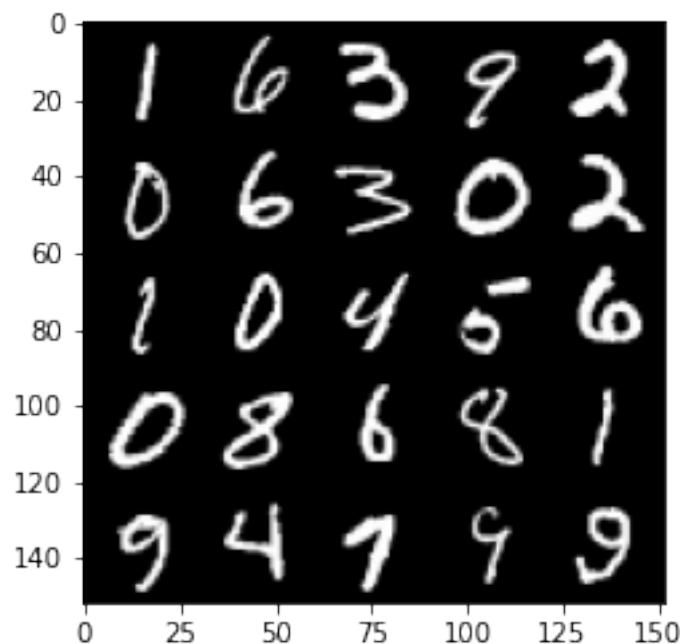
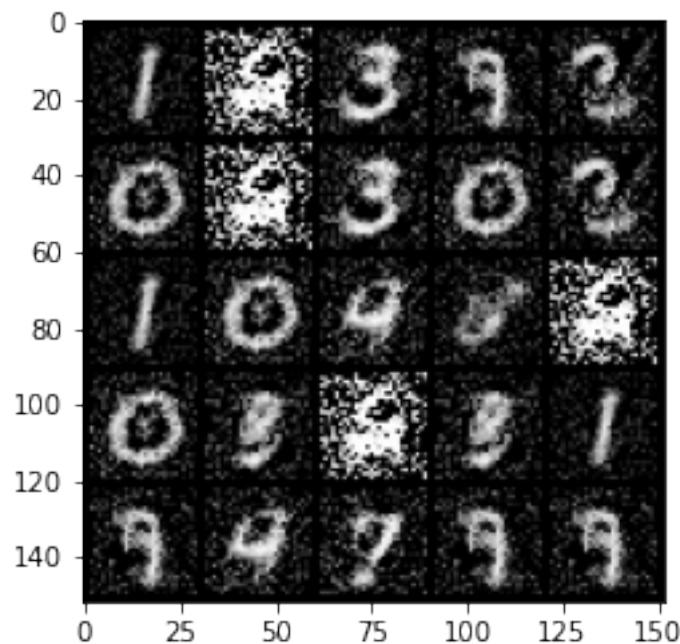
```
100%|    | 469/469 [00:14<00:00, 32.73it/s]
77%|    | 362/469 [00:10<00:03, 31.84it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 173, step 81500 -> generator loss: 0.4544497994780538, discriminator loss:
0.6898850995302201
```



```
100%|     | 469/469 [00:14<00:00, 32.79it/s]
83%|     | 391/469 [00:11<00:02, 30.79it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

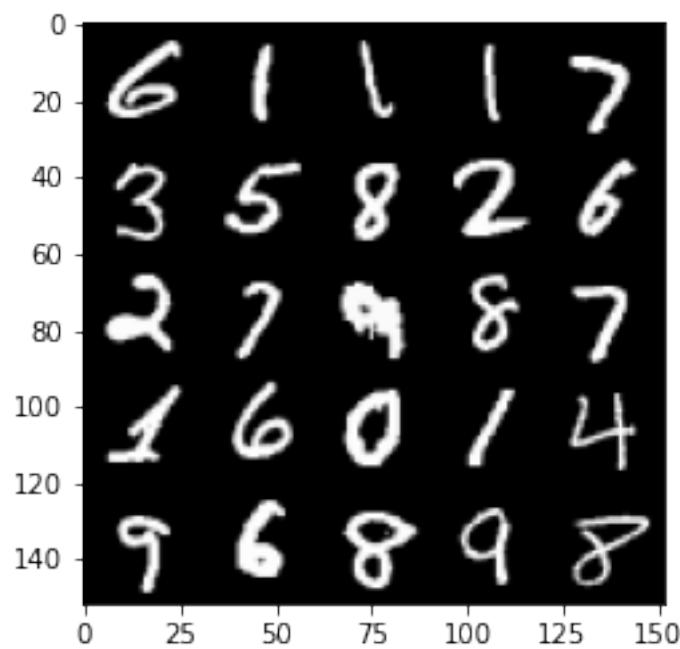
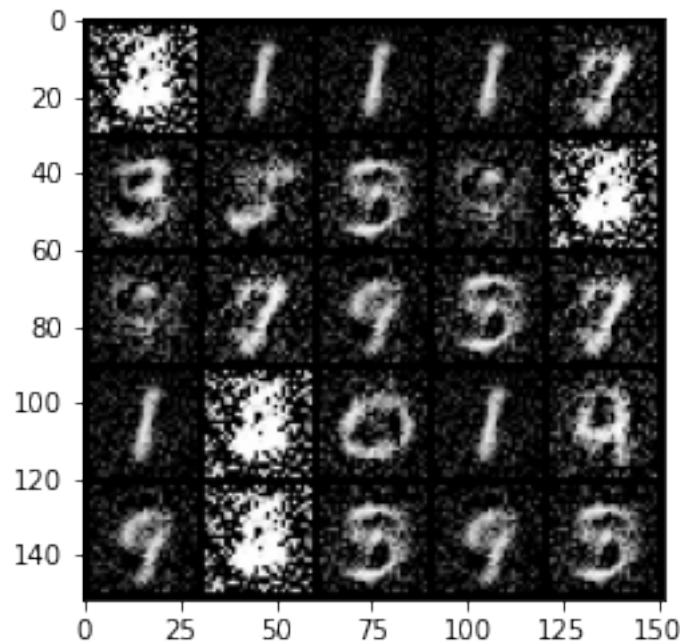
Epoch 174, step 82000 → generator loss: 0.44339484387636197, discriminator loss: 0.708403490662575



100% | 469/469 [00:14<00:00, 32.56it/s]

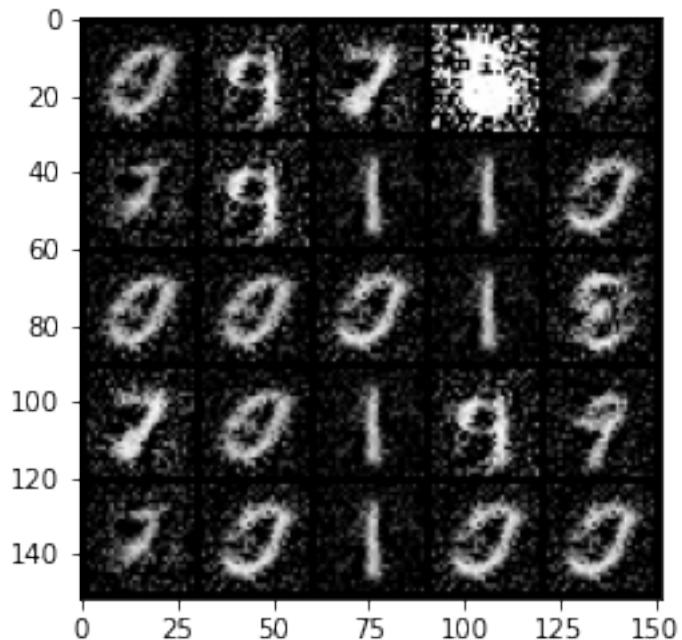
90%| 423/469 [00:12<00:01, 32.76it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

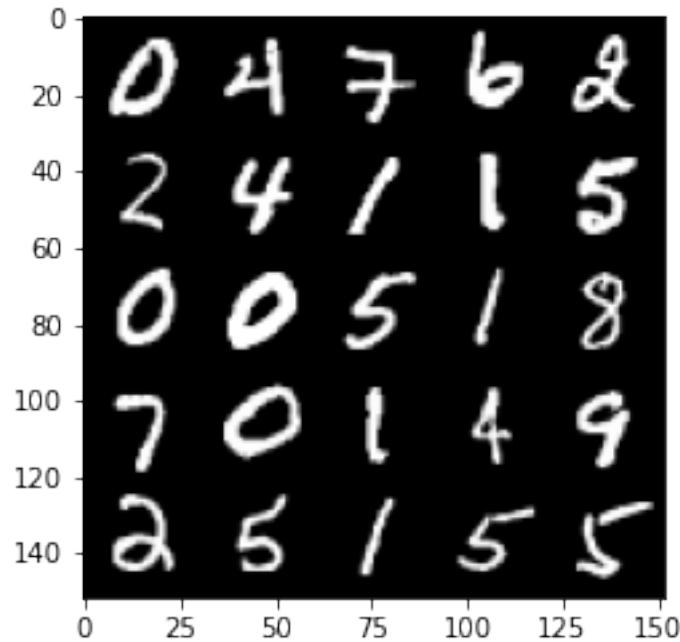
Epoch 175, step 82500 -> generator loss: 0.4460475566983225, discriminator loss: 0.7011035194396971



```
100%|     | 469/469 [00:14<00:00, 32.50it/s]
97%|     | 454/469 [00:13<00:00, 34.38it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

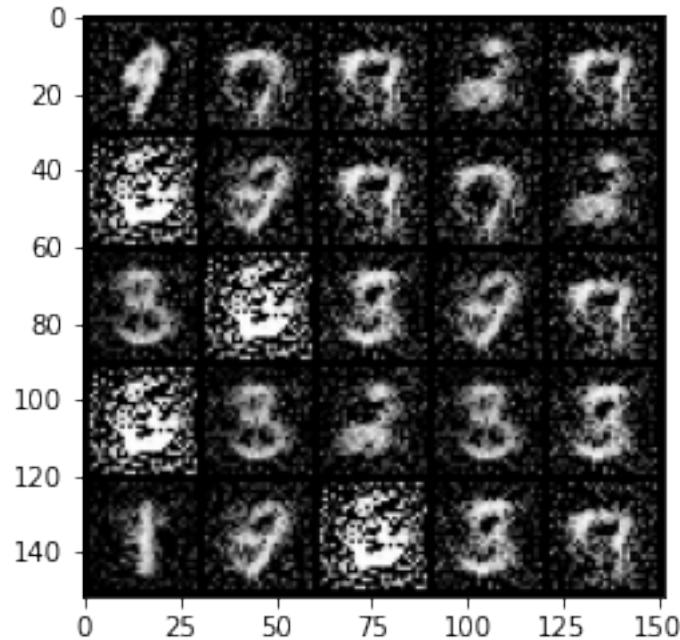
```
Epoch 176, step 83000 -> generator loss: 0.4491148176193236, discriminator loss:
0.6992185714244831
```

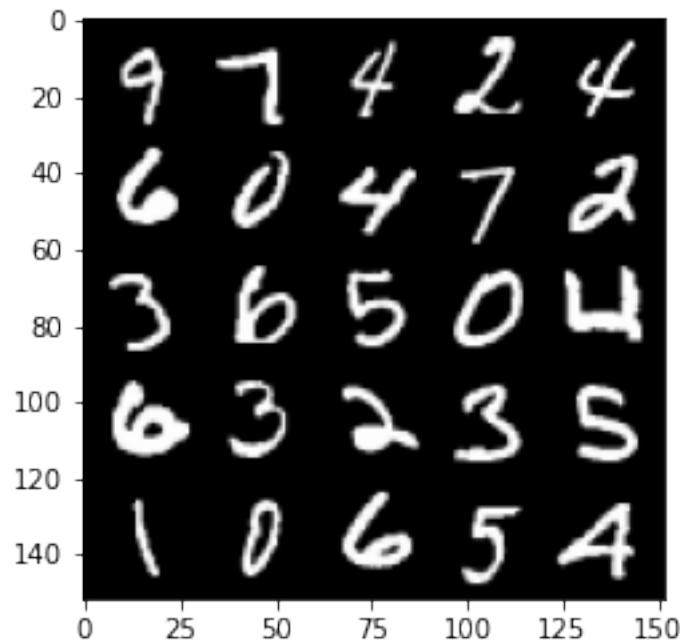




```
100%|   | 469/469 [00:14<00:00, 32.32it/s]
100%|   | 469/469 [00:13<00:00, 33.69it/s]
 3%|   | 16/469 [00:00<00:13, 32.37it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

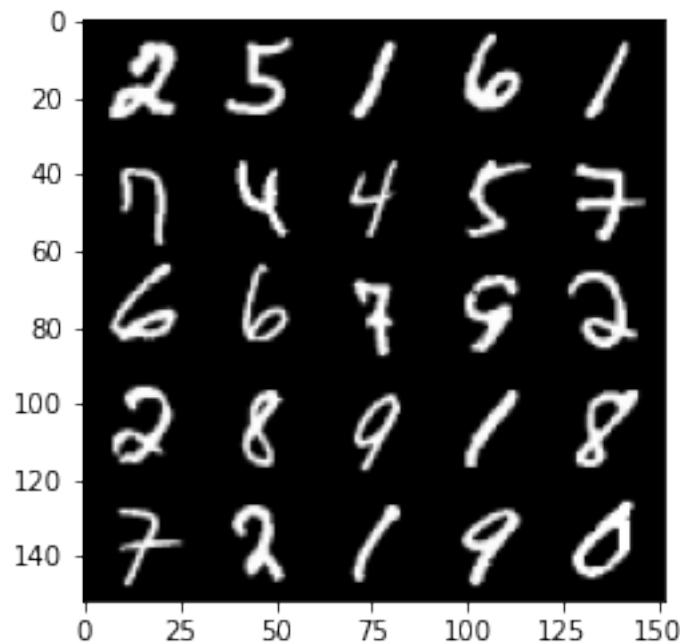
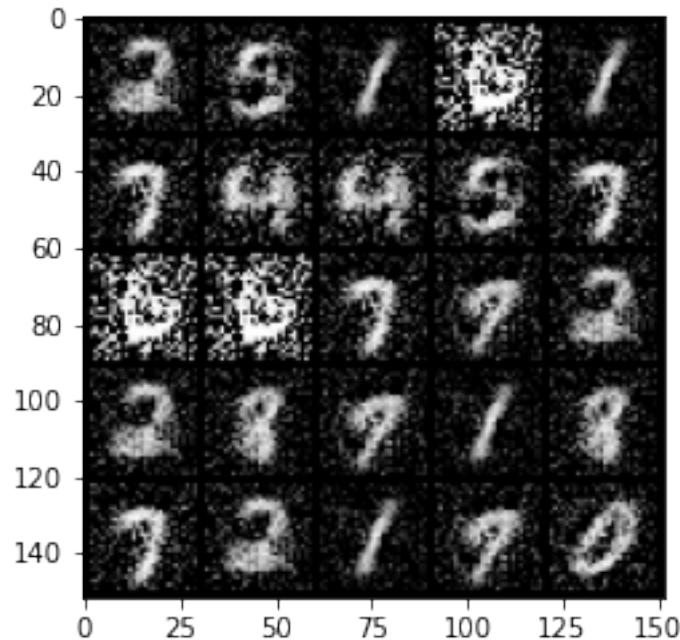
Epoch 178, step 83500 -> generator loss: 0.4568565709590914, discriminator loss:
0.6895741175413128
```





```
100% | 469/469 [00:14<00:00, 32.49it/s]
10% | 46/469 [00:01<00:12, 34.03it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

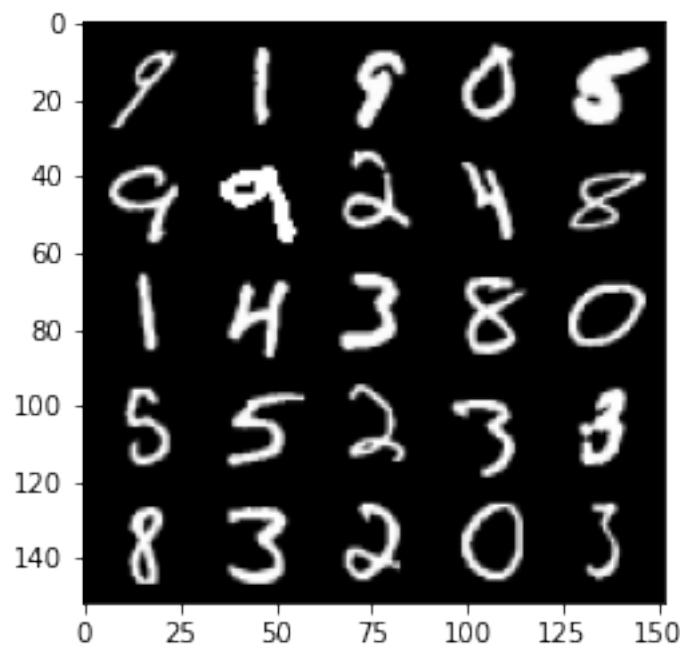
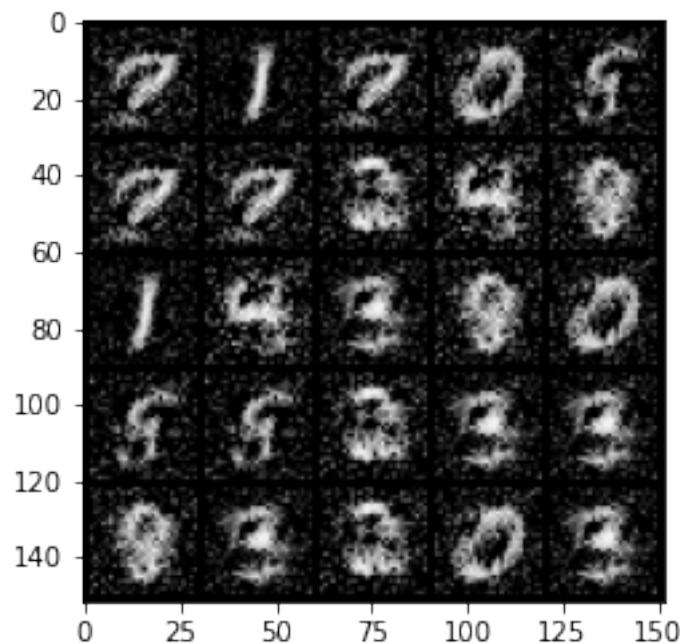
```
Epoch 179, step 84000 -> generator loss: 0.44877325844764704, discriminator
loss: 0.6989614312648768
```



```
100%| 469/469 [00:14<00:00, 32.97it/s]
17%| 80/469 [00:02<00:13, 29.65it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 180, step 84500 -> generator loss: 0.4472154800295826, discriminator loss:

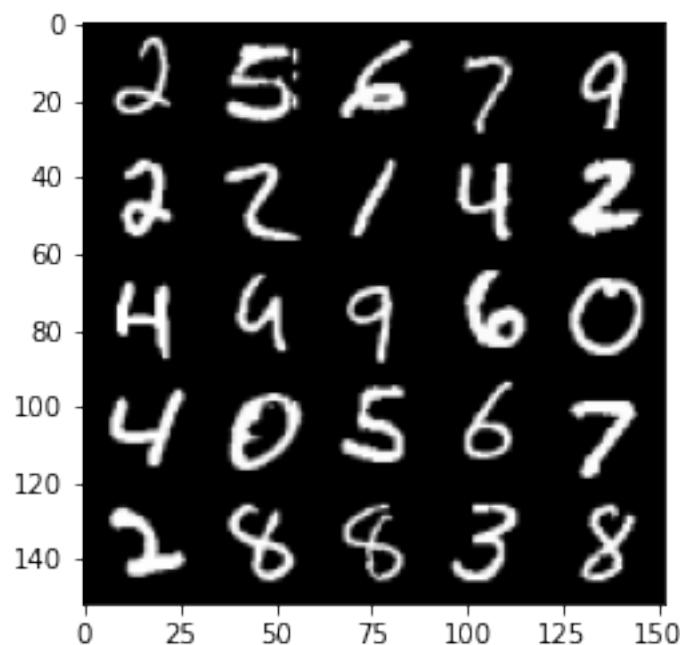
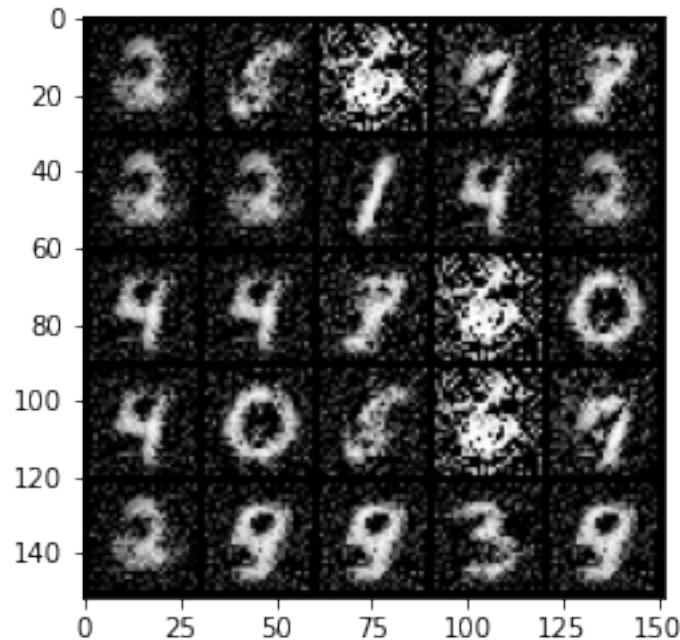
0.6967277513742449



100% | 469/469 [00:14<00:00, 32.69it/s]  
24% | 111/469 [00:03<00:10, 34.69it/s] Clipping input data to the

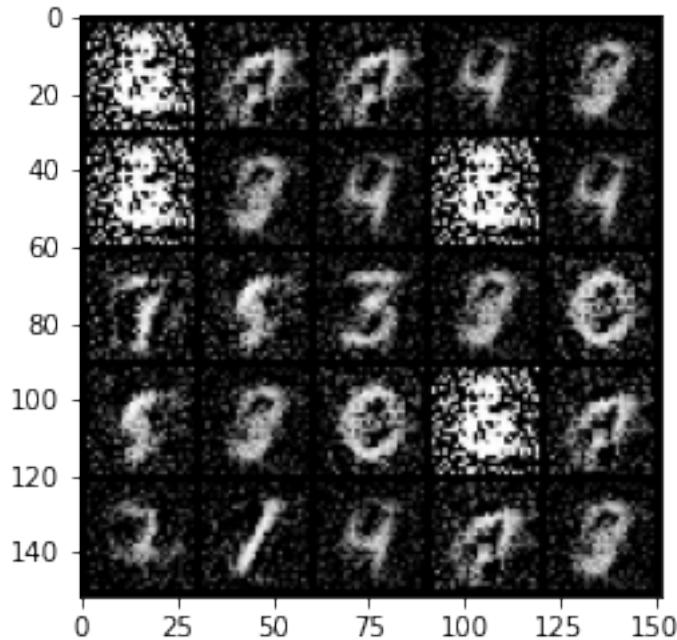
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

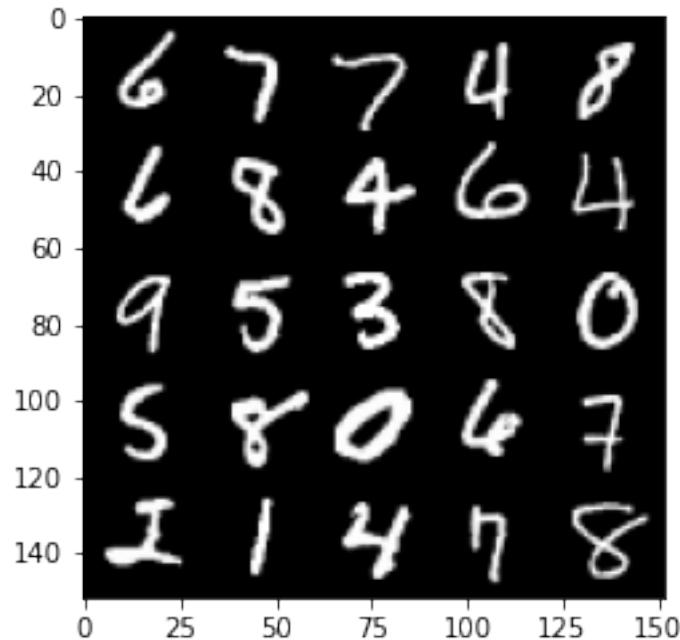
Epoch 181, step 85000 -> generator loss: 0.44920553249120676, discriminator loss: 0.6970533269643782



```
100%|    | 469/469 [00:14<00:00, 33.12it/s]
30%|    | 139/469 [00:03<00:09, 36.50it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

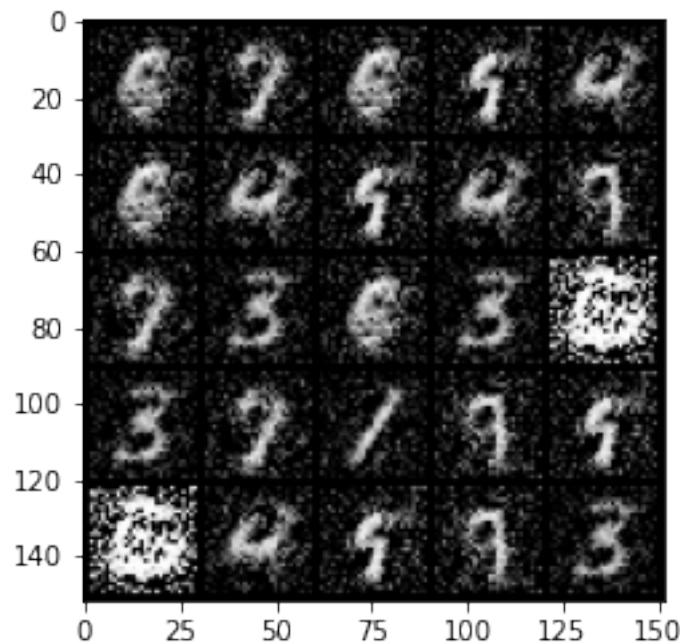
```
Epoch 182, step 85500 -> generator loss: 0.4520167462825776, discriminator loss:
0.6866081879138948
```

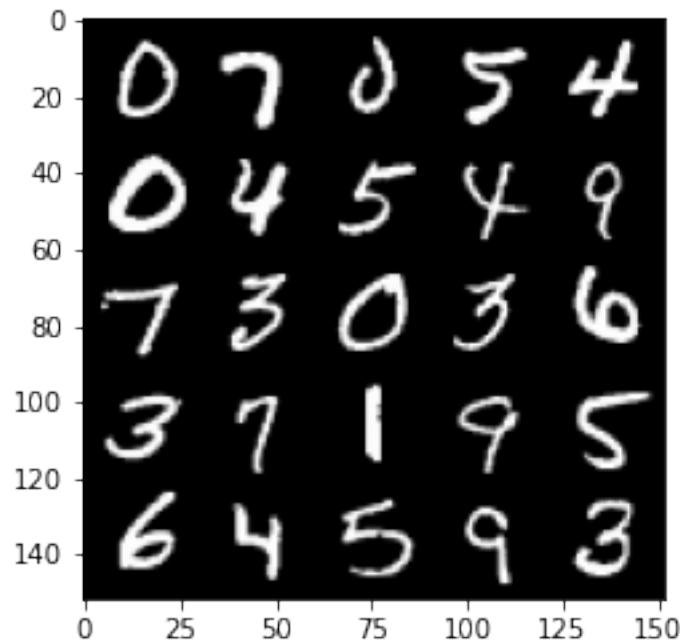




```
100% | 469/469 [00:15<00:00, 30.57it/s]
36% | 171/469 [00:05<00:09, 33.09it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

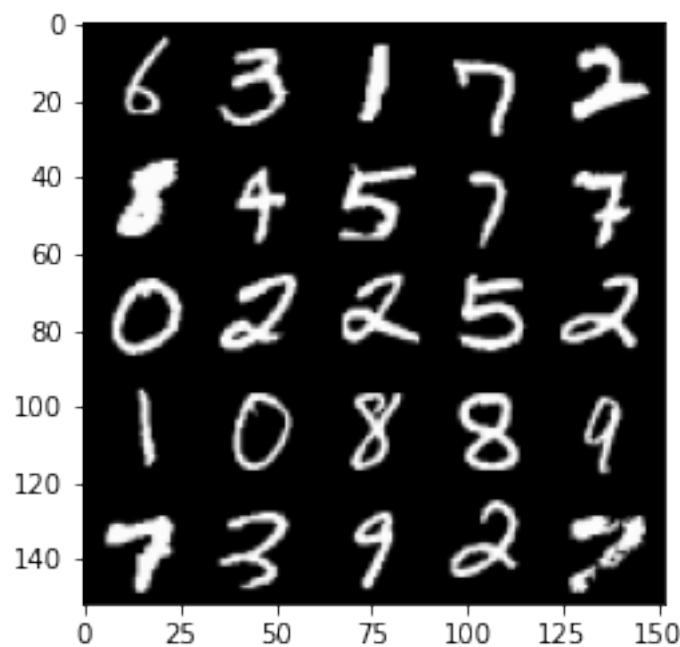
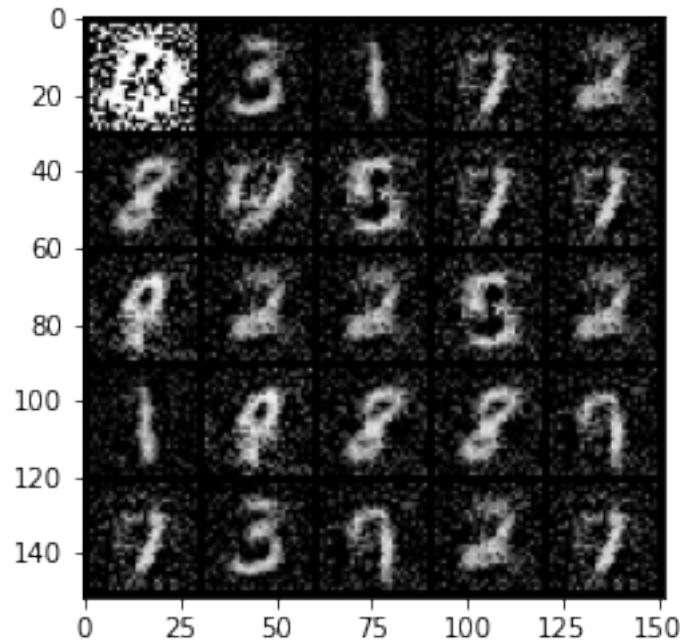
```
Epoch 183, step 86000 -> generator loss: 0.4554595124125477, discriminator loss:
0.6855505585670468
```





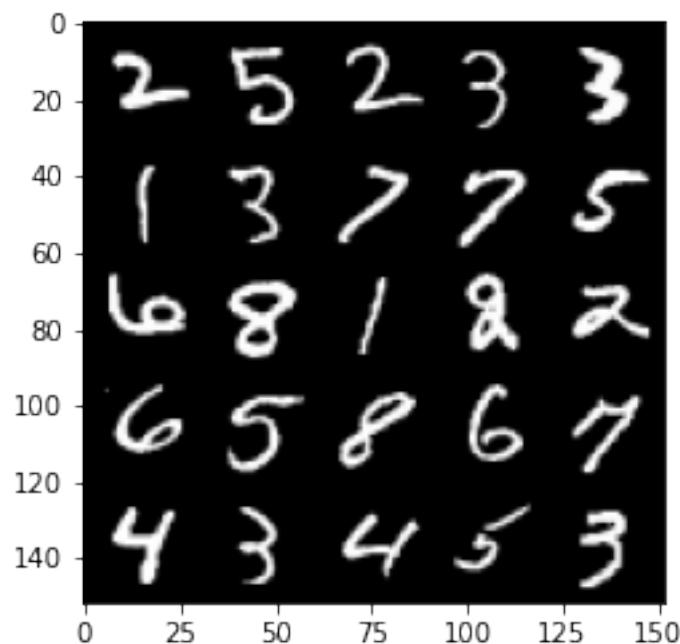
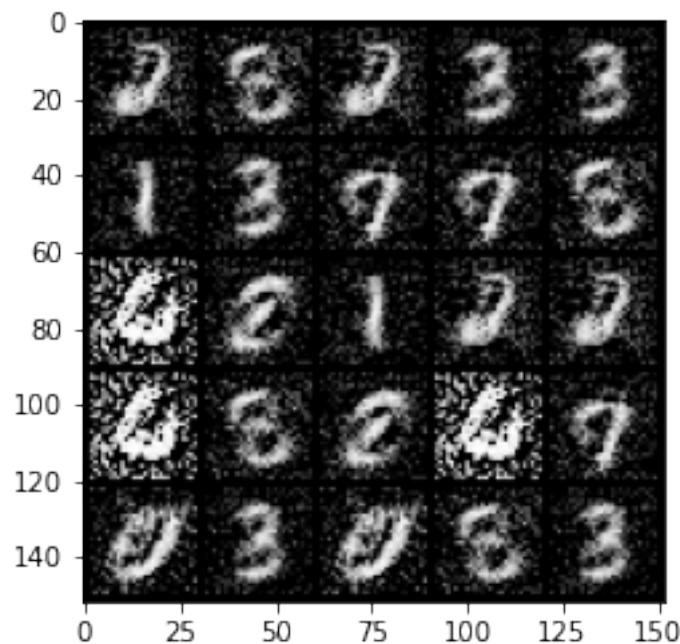
```
100% | 469/469 [00:15<00:00, 30.07it/s]
43% | 202/469 [00:06<00:07, 33.88it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 184, step 86500 -> generator loss: 0.45922095566987964, discriminator
loss: 0.6794502172470095
```



100% | 469/469 [00:14<00:00, 32.44it/s]  
50% | 234/469 [00:06<00:06, 33.92it/s] Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).

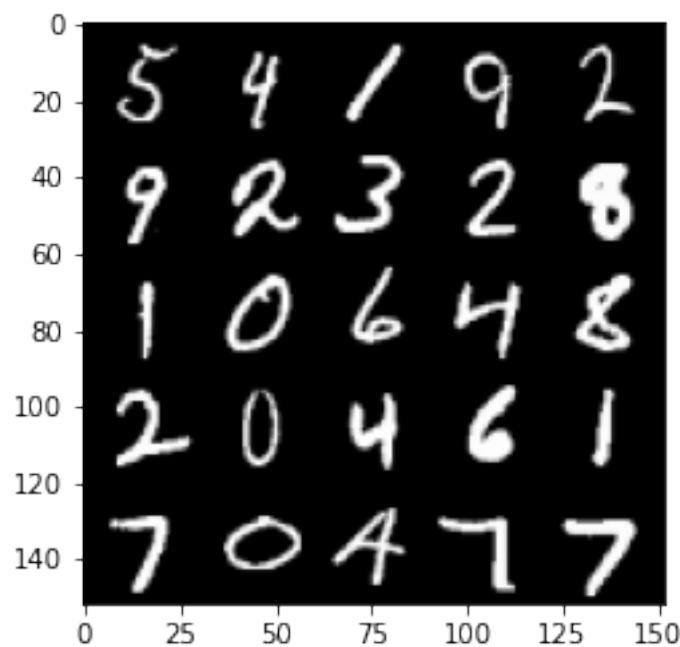
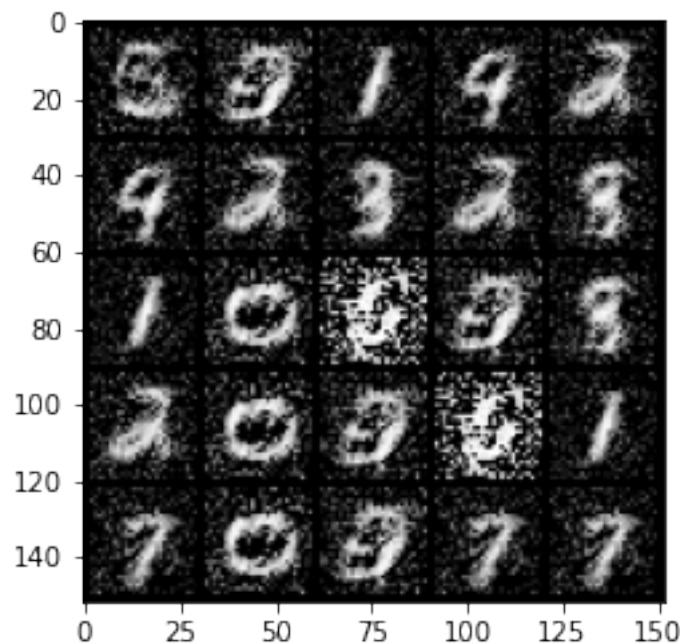
Epoch 185, step 87000 -> generator loss: 0.4553073374629023, discriminator loss: 0.687594364285469



100% | 469/469 [00:14<00:00, 32.65it/s]

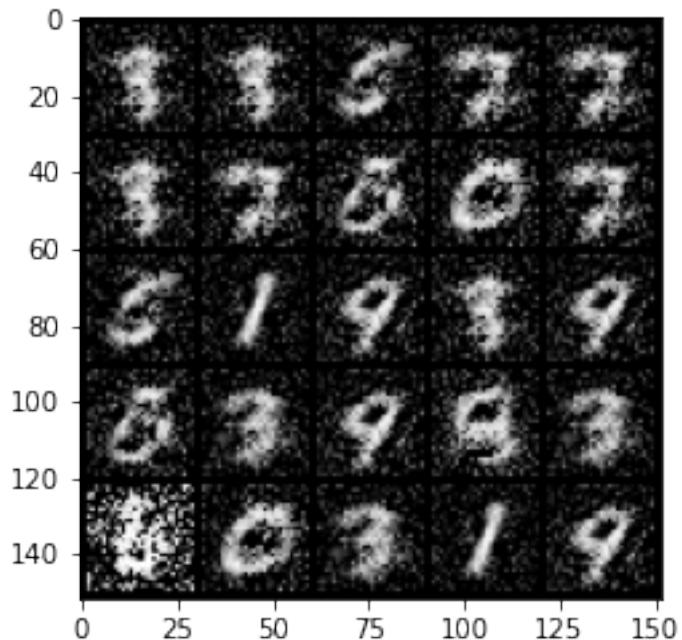
56% | 264/469 [00:07<00:06, 32.42it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

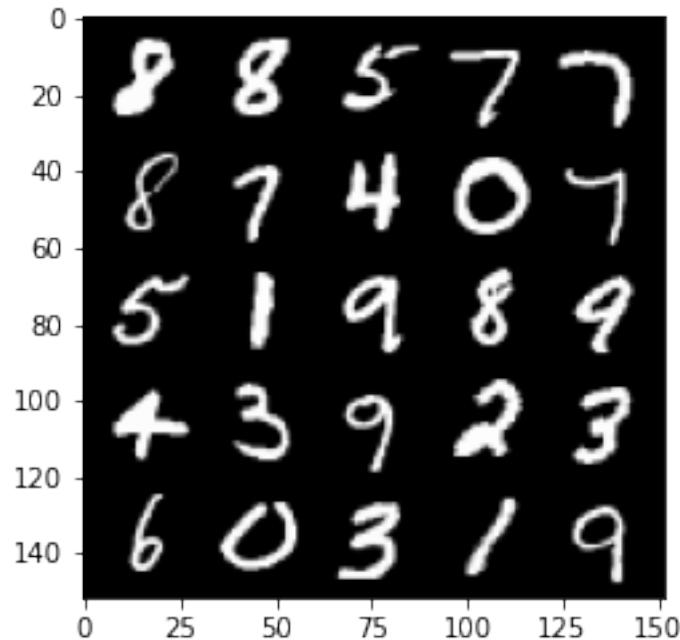
Epoch 186, step 87500 -> generator loss: 0.4564897286295892, discriminator loss: 0.6906321558952332



```
100%|      | 469/469 [00:14<00:00, 32.64it/s]
63%|      | 296/469 [00:10<00:05, 34.28it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

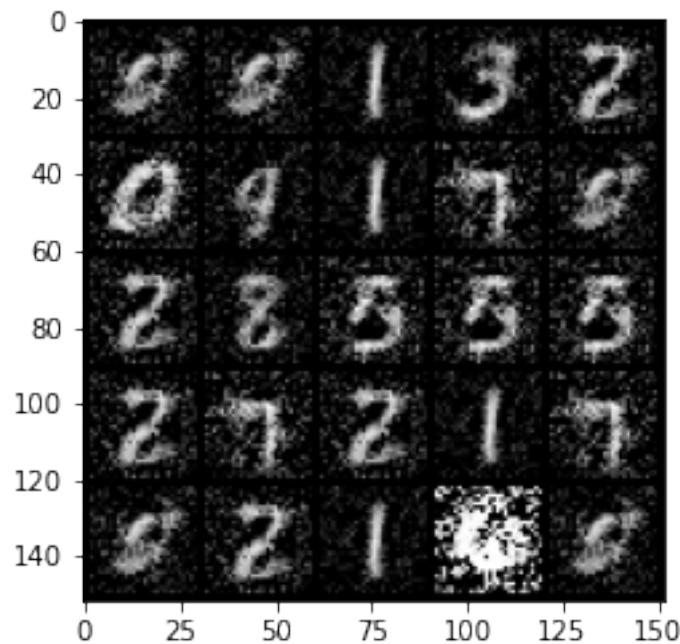
```
Epoch 187, step 88000 -> generator loss: 0.45434606856107757, discriminator
loss: 0.6877972615957253
```

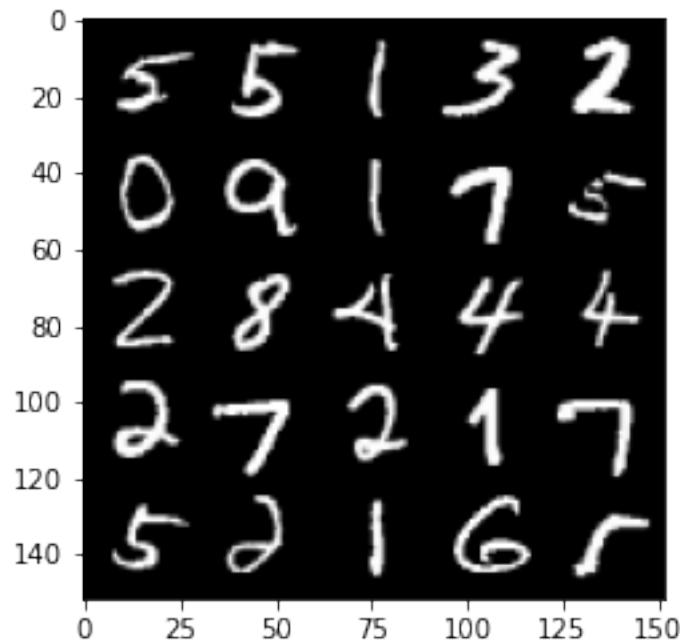




```
100% | 469/469 [00:16<00:00, 28.50it/s]
70% | 328/469 [00:12<00:04, 29.72it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

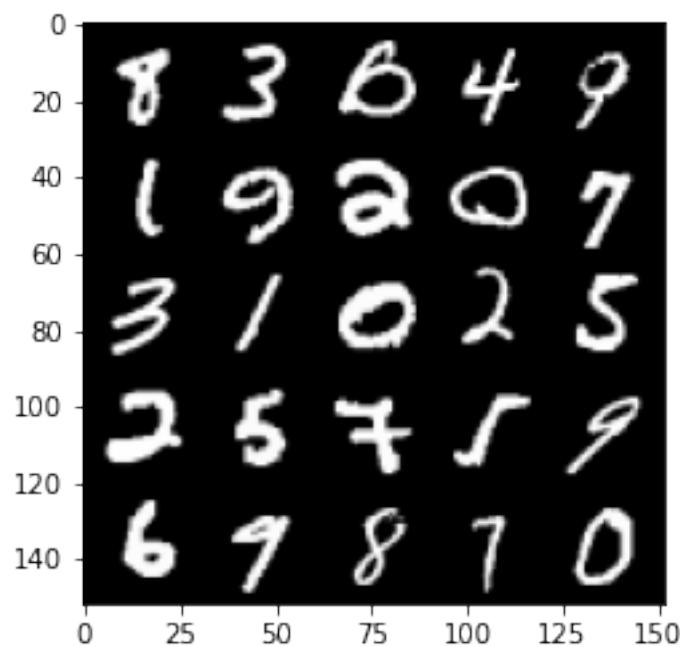
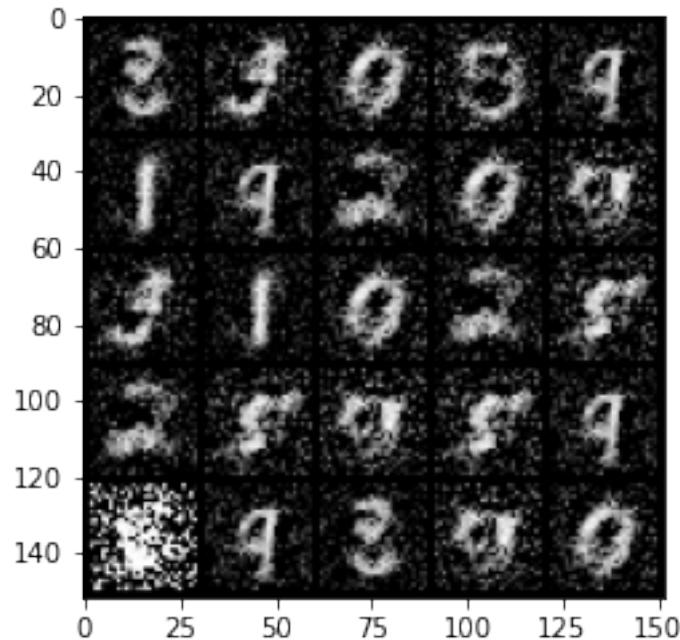
Epoch 188, step 88500 -> generator loss: 0.4497901263833048, discriminator loss: 0.6951077008247374





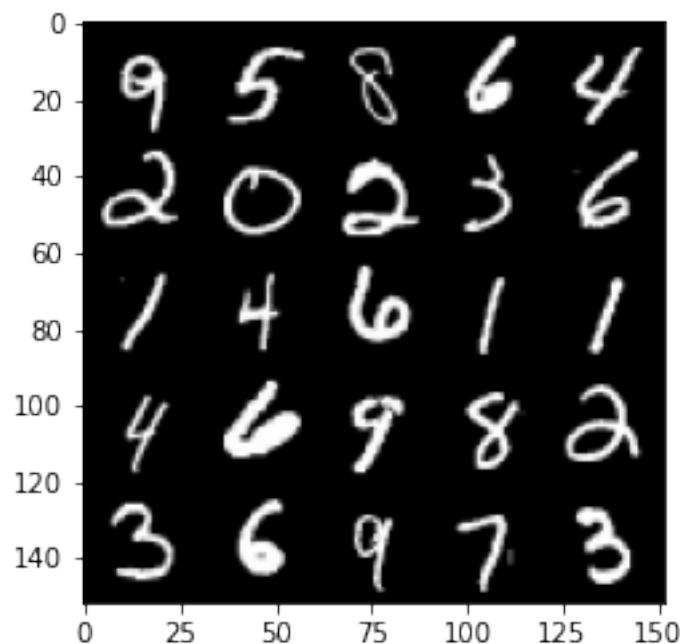
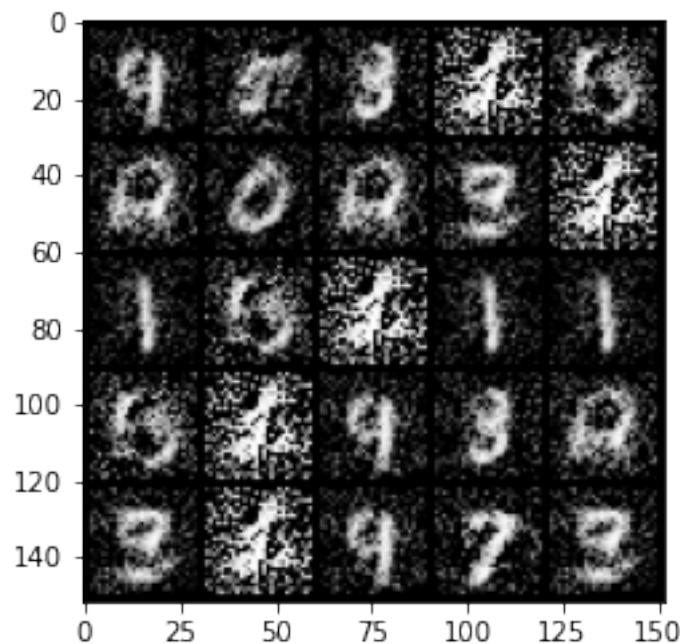
```
100% | 469/469 [00:17<00:00, 27.34it/s]
77% | 359/469 [00:10<00:03, 35.65it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 189, step 89000 -> generator loss: 0.45646260595321697, discriminator
loss: 0.6847608820199964
```



```
100%|      | 469/469 [00:13<00:00, 33.84it/s]
83%|      | 388/469 [00:10<00:02, 35.61it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

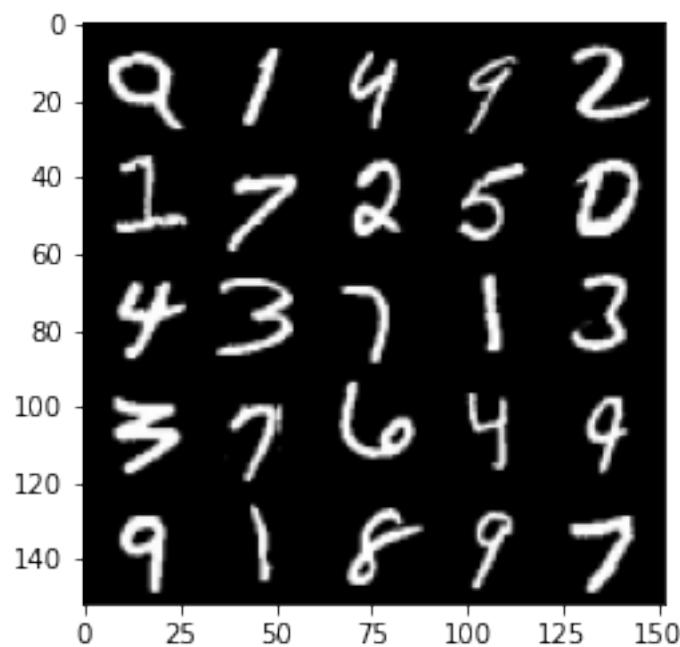
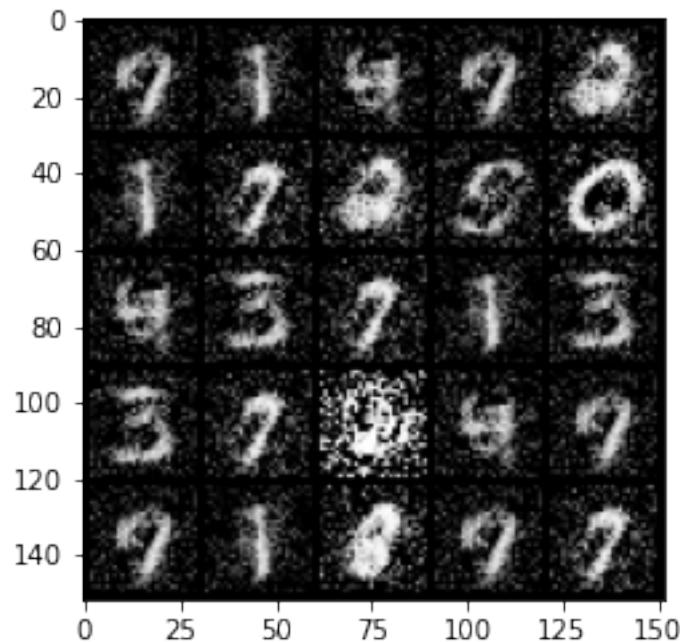
Epoch 190, step 89500 → generator loss: 0.4647615324854855, discriminator loss: 0.675473461747169



100% | 469/469 [00:13<00:00, 34.58it/s]

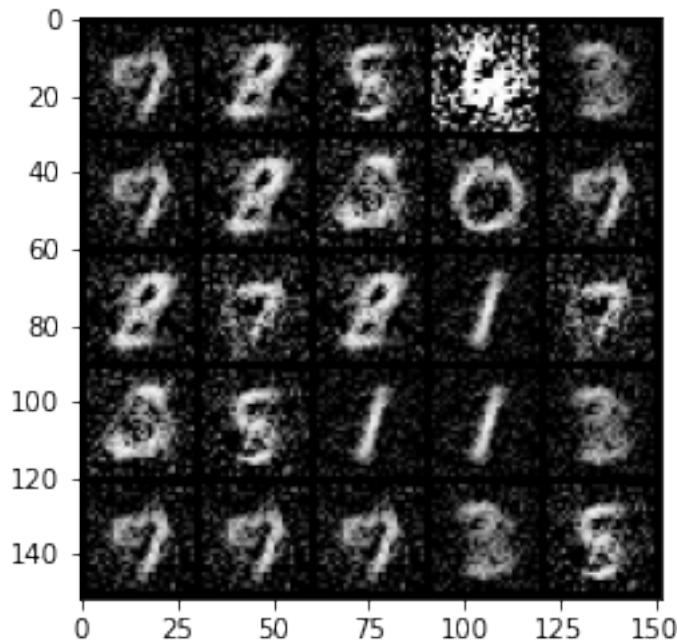
90%| 420/469 [00:11<00:01, 33.66it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

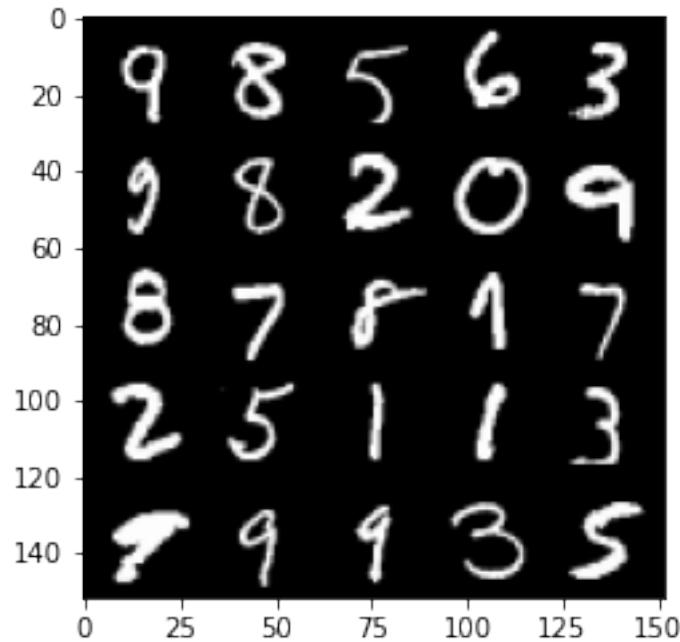
Epoch 191, step 90000 -> generator loss: 0.4544212945103646, discriminator loss: 0.6994611849784852



```
100%|     | 469/469 [00:13<00:00, 33.83it/s]
96%|    | 450/469 [00:13<00:00, 33.67it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

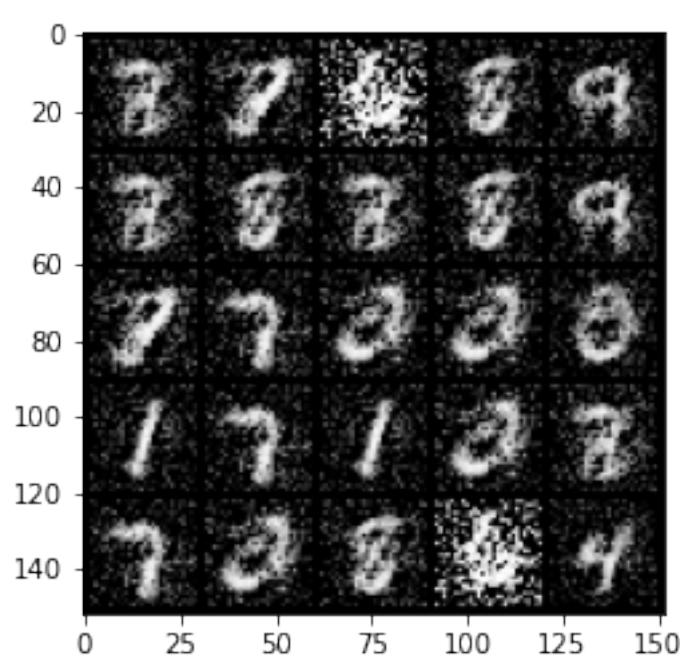
```
Epoch 192, step 90500 -> generator loss: 0.4492293739914895, discriminator loss:
0.6956407399177545
```

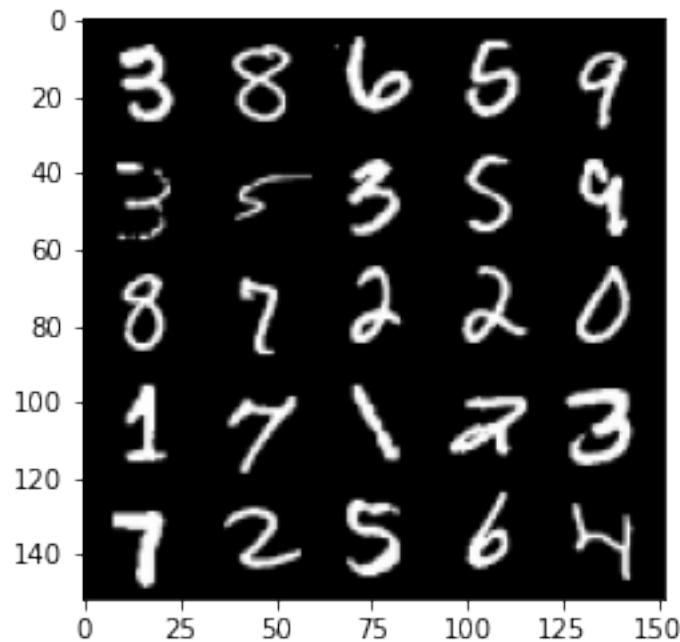




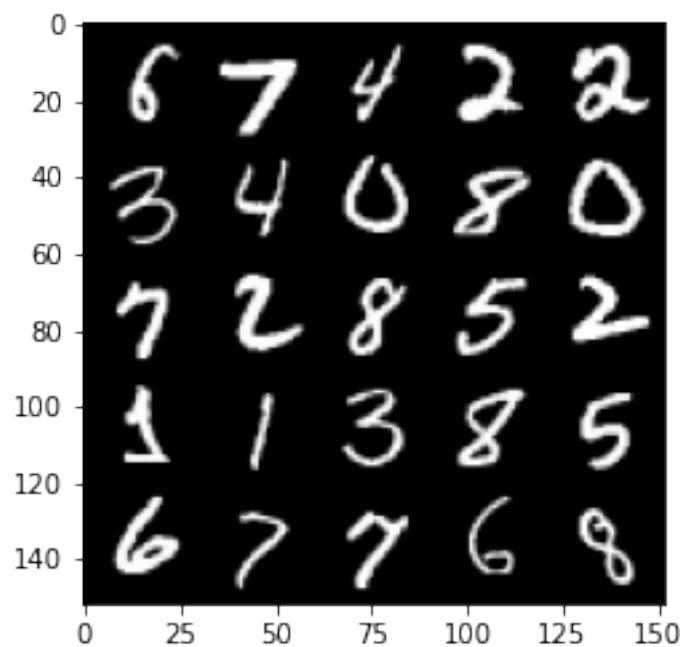
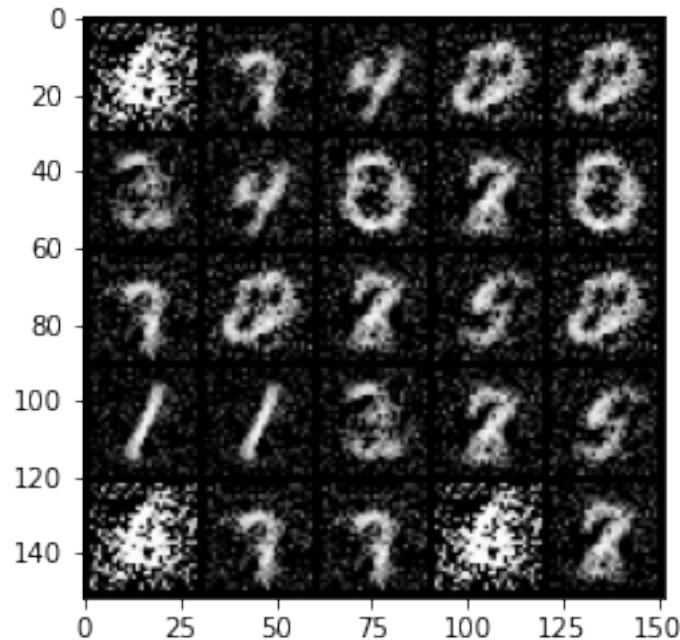
```
100%| 469/469 [00:14<00:00, 32.79it/s]
100%| 469/469 [00:13<00:00, 35.10it/s]
 3%| 12/469 [00:00<00:14, 32.46it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

```
Epoch 194, step 91000 -> generator loss: 0.45189022099971776, discriminator
loss: 0.6916674461364746
```





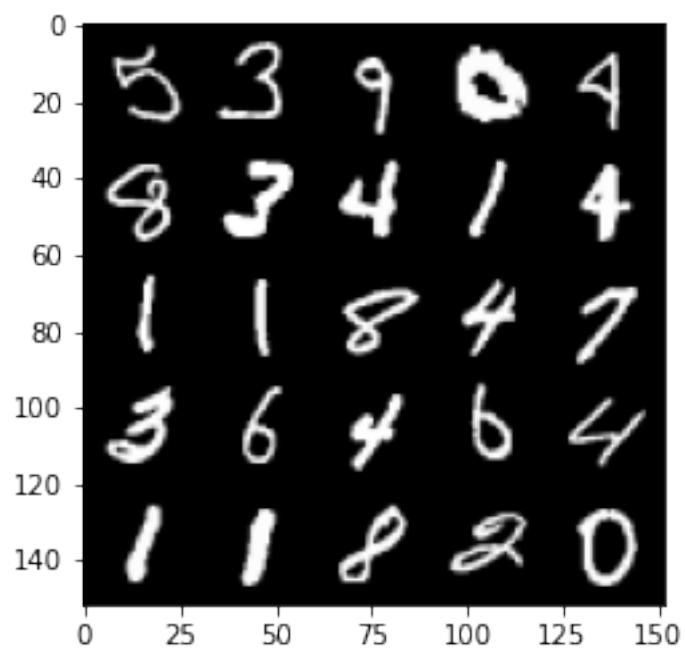
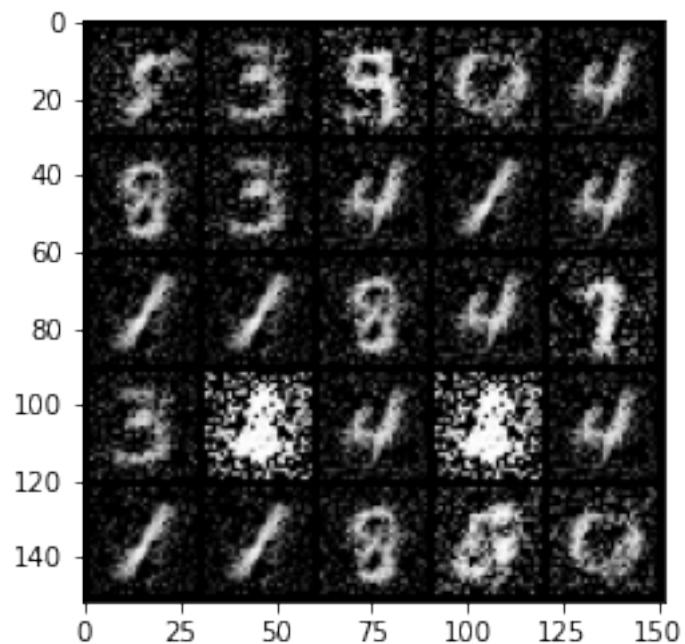
```
100%| 469/469 [00:13<00:00, 34.45it/s]
 9%| 44/469 [00:01<00:12, 35.22it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 195, step 91500 -> generator loss: 0.45223919540643664, discriminator
loss: 0.6870353051424027
```



100% | 469/469 [00:13<00:00, 34.35it/s]  
16% | 75/469 [00:02<00:10, 35.98it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 196, step 92000 -> generator loss: 0.457211048424244, discriminator loss:

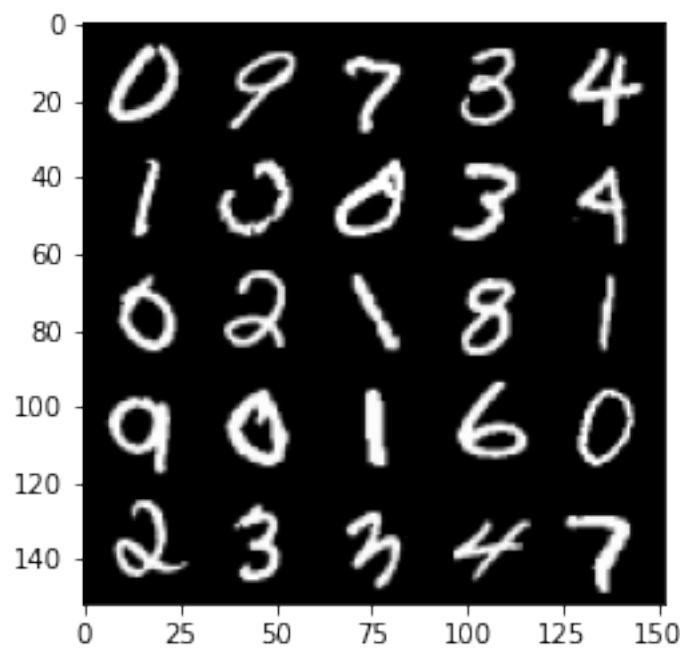
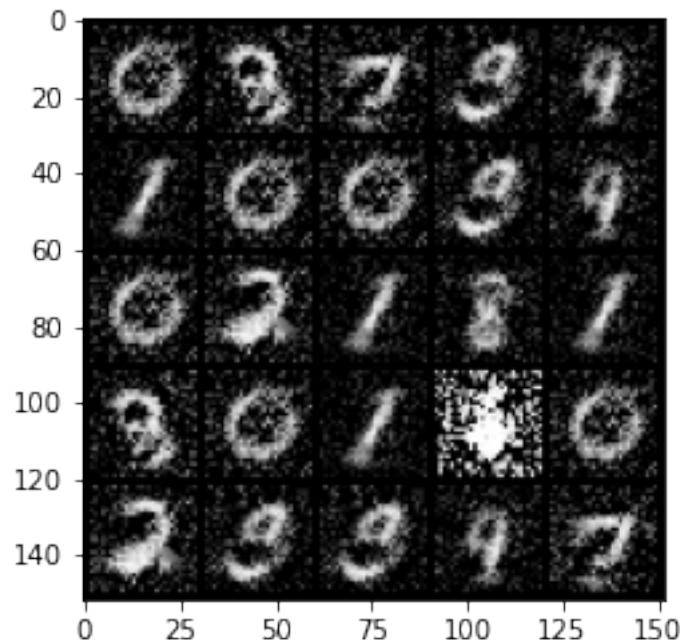
0.6835624347925185



100% | 469/469 [00:13<00:00, 34.53it/s]  
22% | 104/469 [00:02<00:10, 35.25it/s] Clipping input data to the

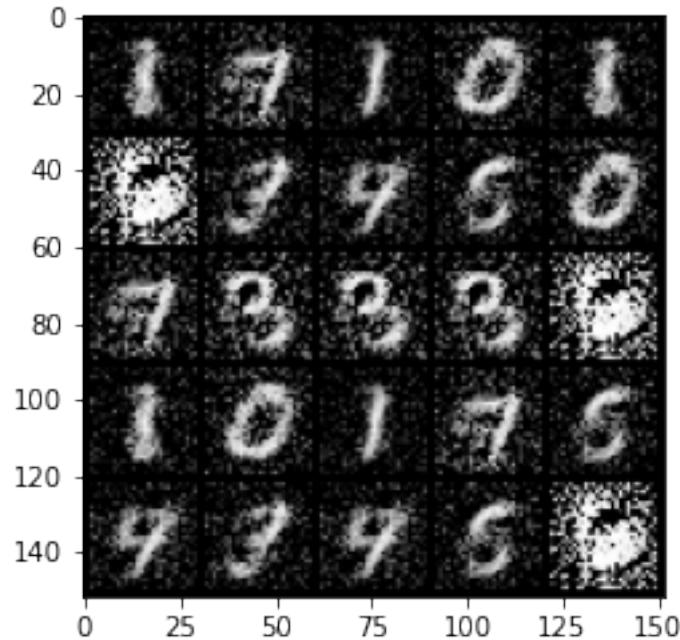
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

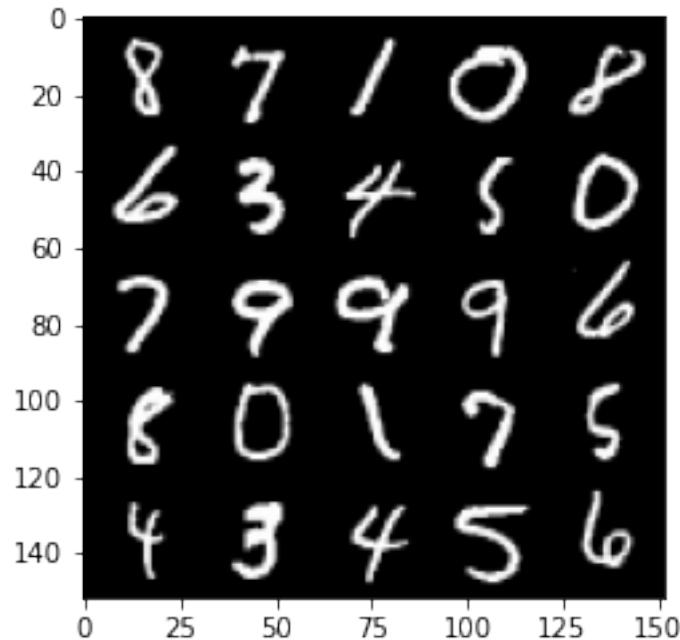
Epoch 197, step 92500 -> generator loss: 0.46576609724760026, discriminator loss: 0.6793227919340138



```
100%|    | 469/469 [00:13<00:00, 34.86it/s]
29%|    | 136/469 [00:03<00:09, 36.09it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

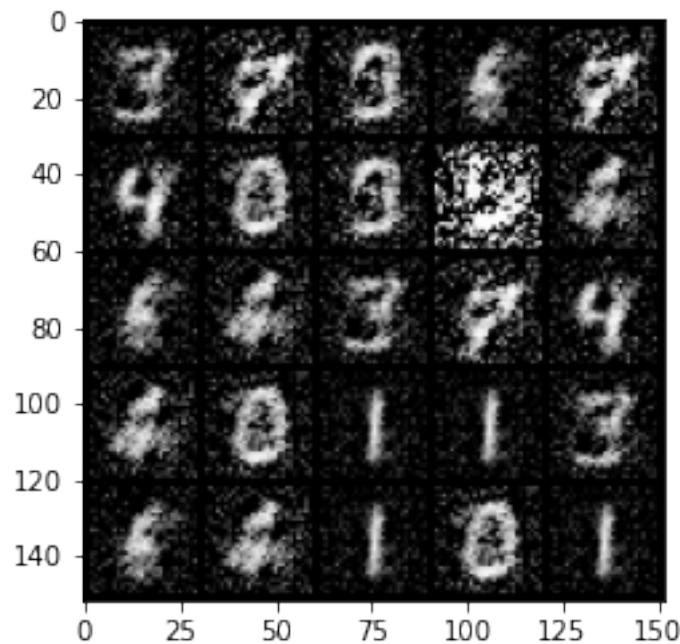
Epoch 198, step 93000 -> generator loss: 0.45491491281986224, discriminator loss: 0.691602705121041

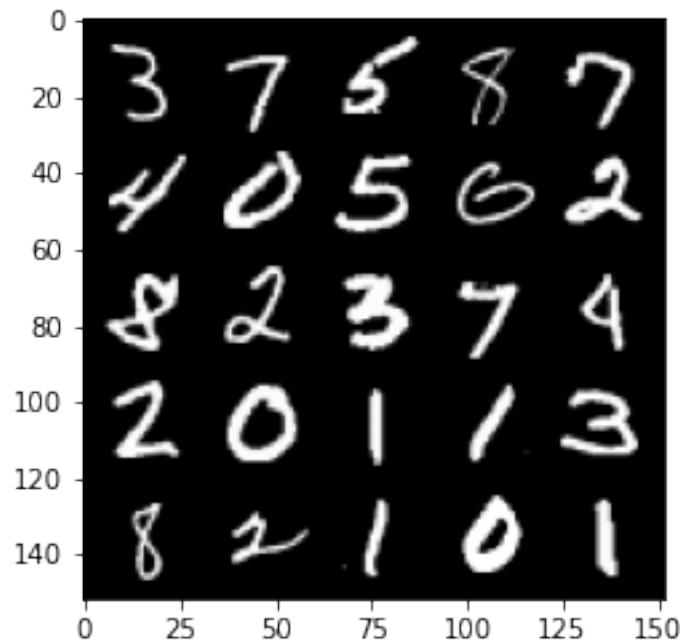




```
100%|      | 469/469 [00:13<00:00, 34.47it/s]
36%|      | 168/469 [00:04<00:08, 35.00it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

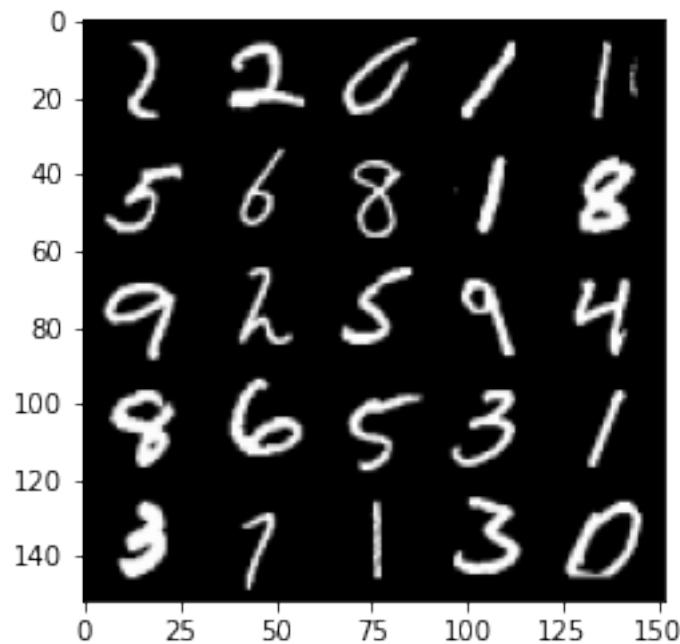
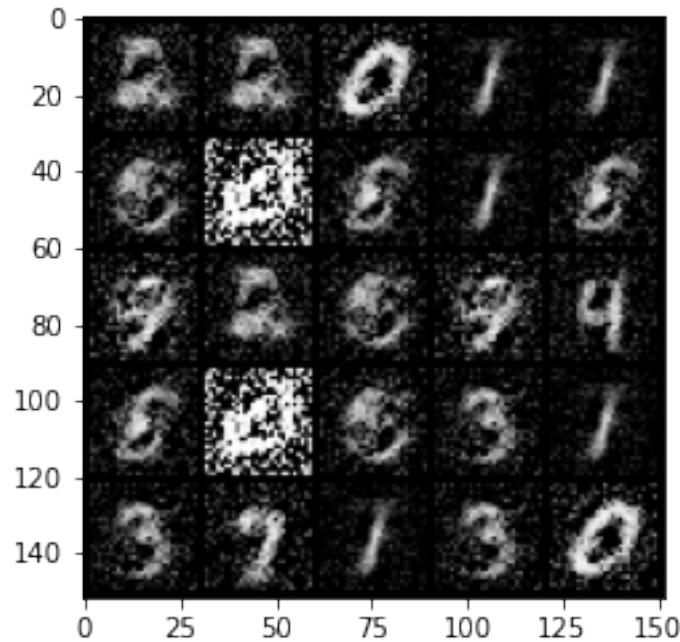
```
Epoch 199, step 93500 -> generator loss: 0.4587592244148254, discriminator loss:
0.6868511408567433
```





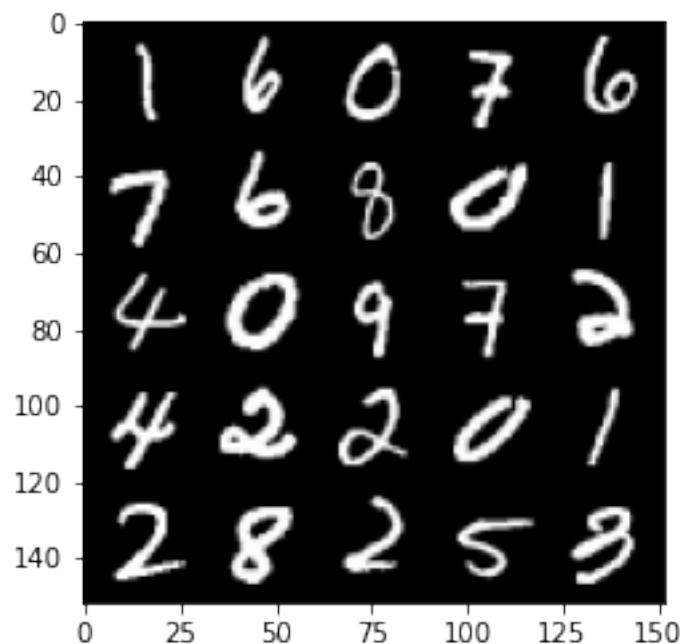
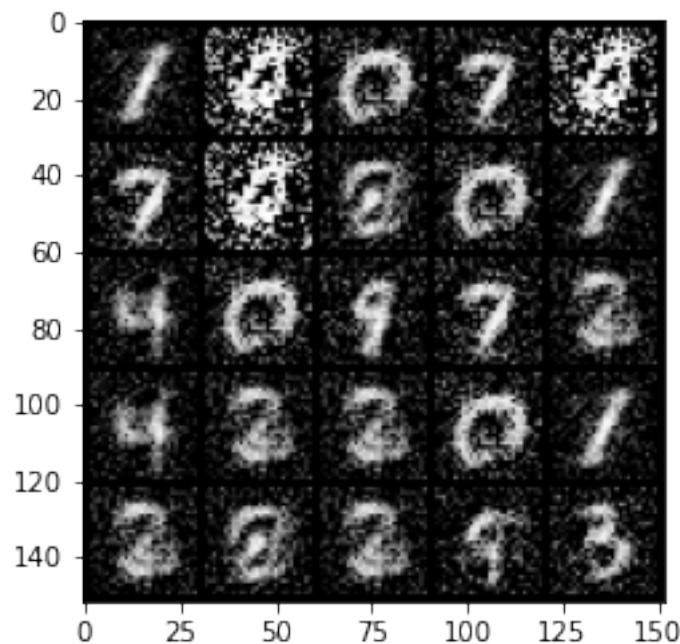
```
100% | 469/469 [00:13<00:00, 34.40it/s]
42% | 199/469 [00:05<00:07, 35.60it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 200, step 94000 -> generator loss: 0.4577654959559441, discriminator loss:
0.6848655688762664
```



```
100%|      | 469/469 [00:13<00:00, 34.68it/s]
49%|      | 228/469 [00:06<00:06, 36.33it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

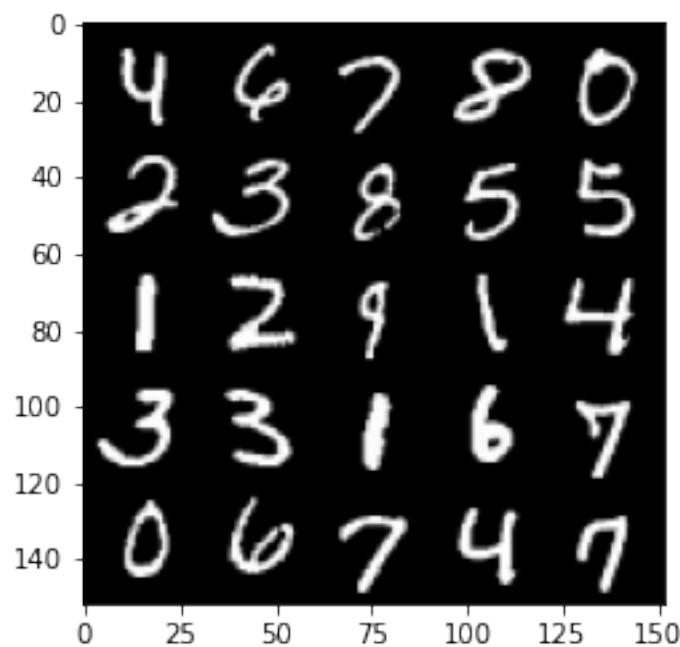
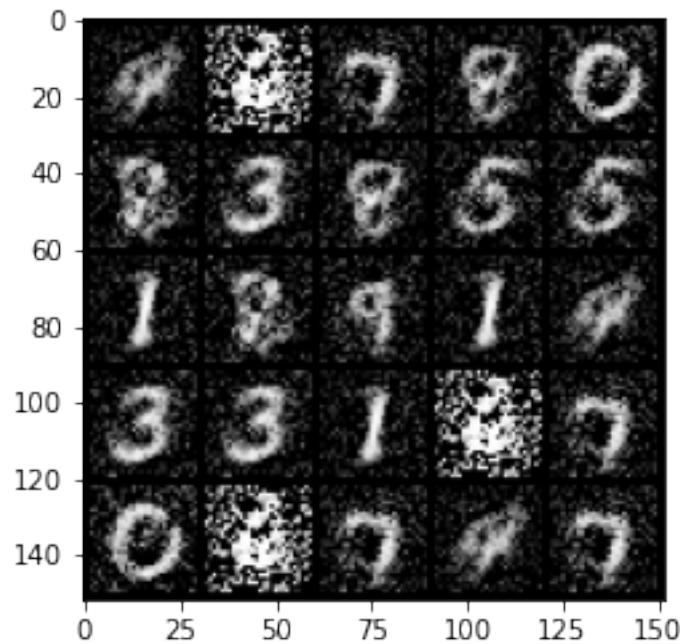
Epoch 201, step 94500 -> generator loss: 0.4467032990455632, discriminator loss: 0.7026188941001897



100% | 469/469 [00:13<00:00, 34.38it/s]

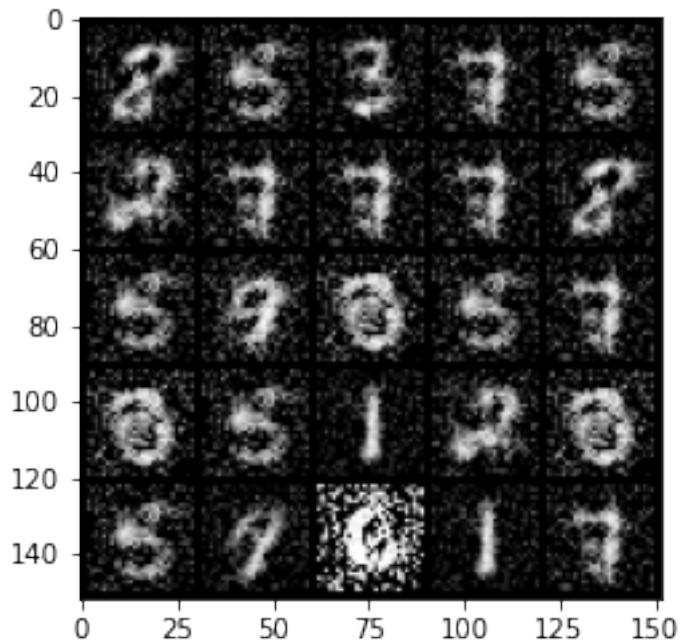
56%| 262/469 [00:07<00:05, 36.21it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

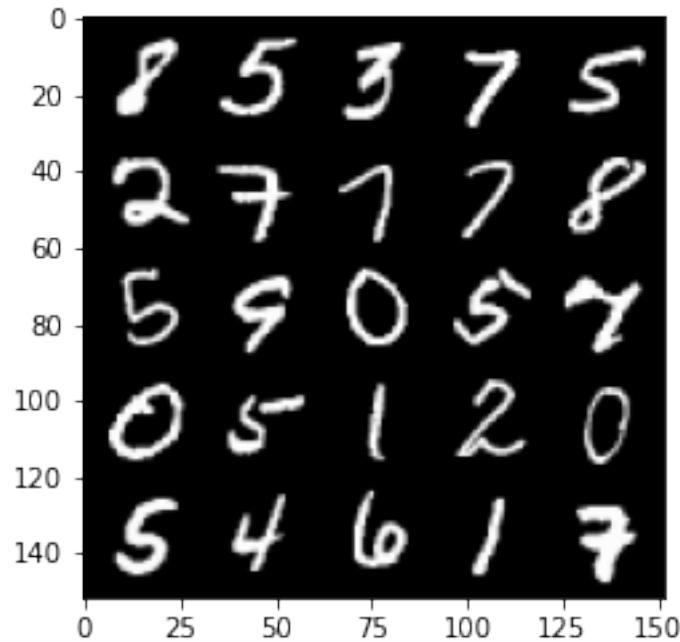
Epoch 202, step 95000 -> generator loss: 0.4573275919556618, discriminator loss: 0.6841147382259367



```
100%|      | 469/469 [00:13<00:00, 33.78it/s]
62%|      | 291/469 [00:08<00:04, 36.46it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

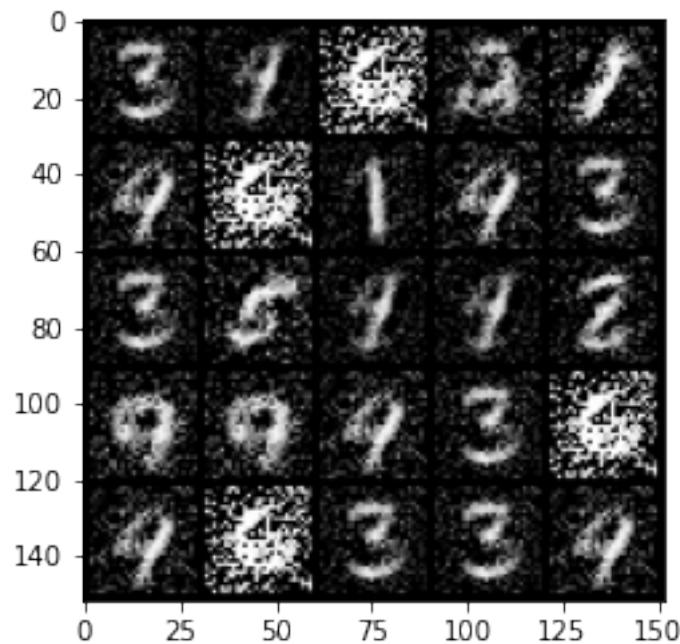
Epoch 203, step 95500 -> generator loss: 0.45223715084791216, discriminator loss: 0.6949977484941483

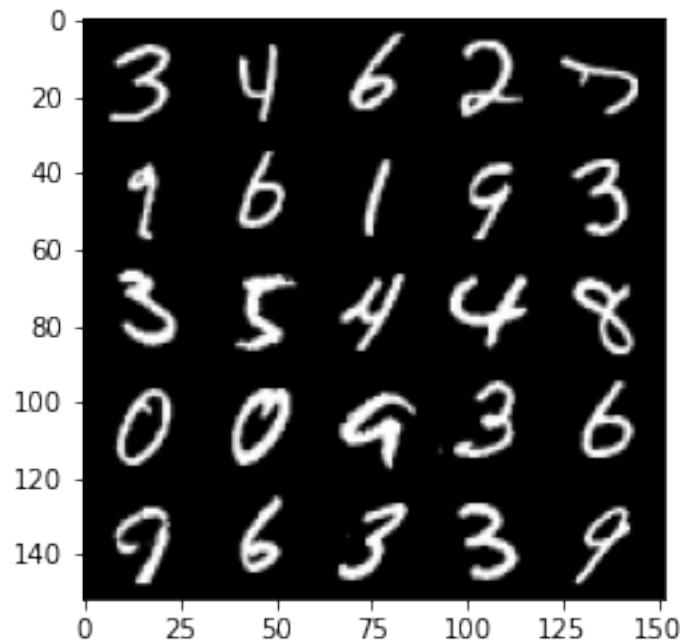




```
100%|      | 469/469 [00:13<00:00, 34.64it/s]
69%|      | 323/469 [00:09<00:04, 36.47it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

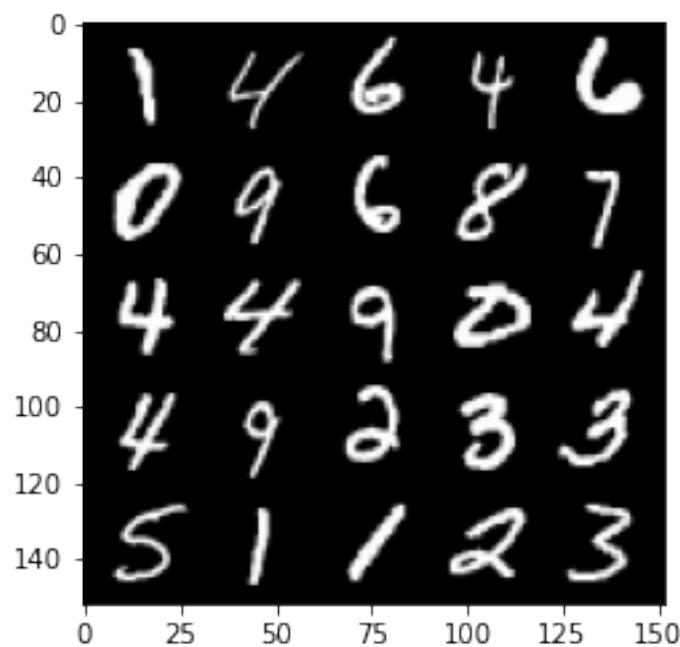
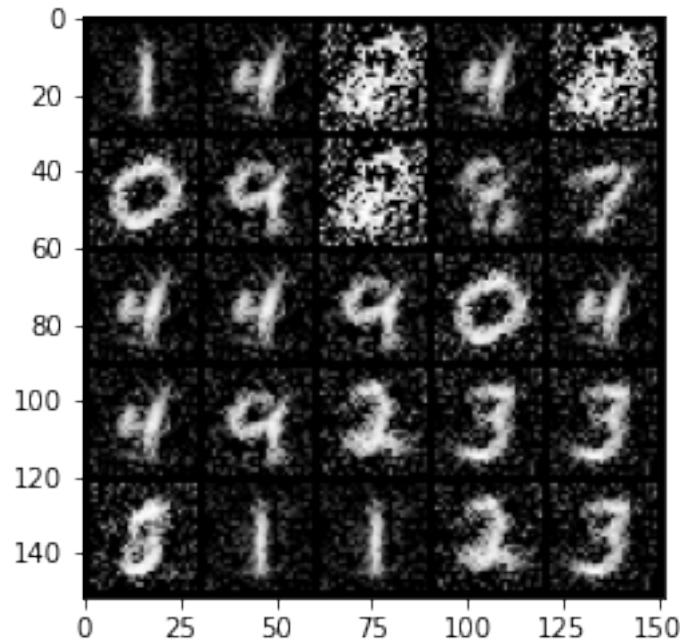
```
Epoch 204, step 96000 -> generator loss: 0.46012060385942416, discriminator
loss: 0.6787903833389282
```





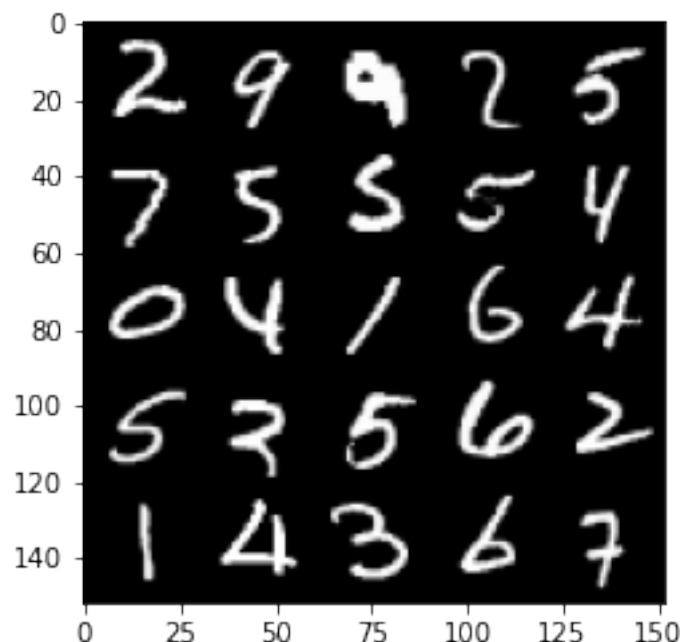
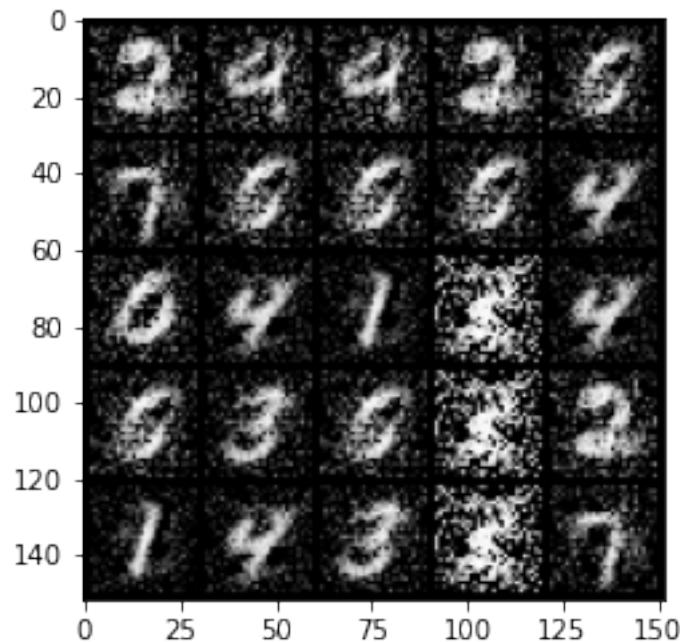
```
100%|     | 469/469 [00:13<00:00, 34.53it/s]
75%|     | 352/469 [00:09<00:03, 35.28it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 205, step 96500 -> generator loss: 0.45734528201818464, discriminator
loss: 0.6928628450632095
```



```
100%|      | 469/469 [00:13<00:00, 34.60it/s]
82%|      | 384/469 [00:10<00:02, 34.62it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

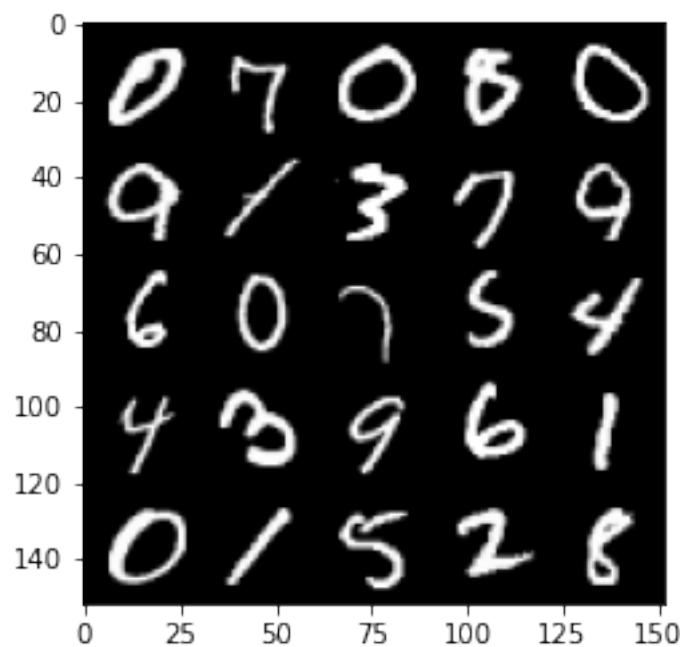
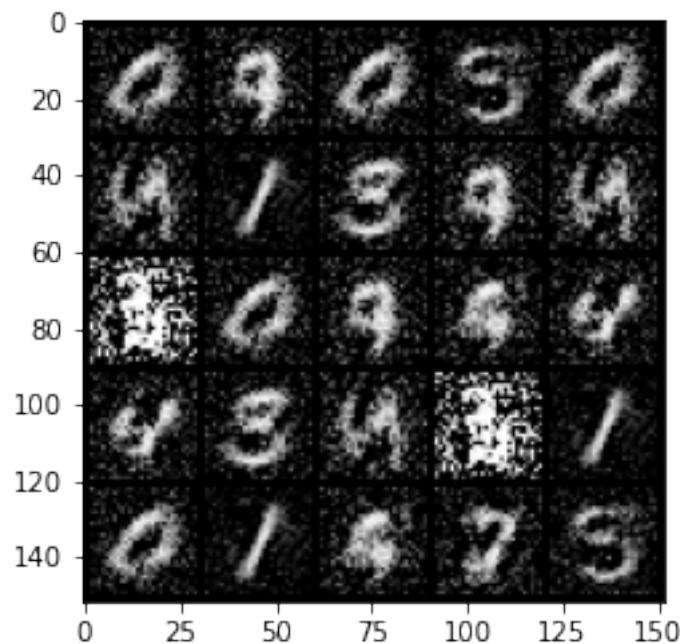
Epoch 206, step 97000 -> generator loss: 0.4520040358901023, discriminator loss: 0.6927468020915988



100% | 469/469 [00:13<00:00, 34.37it/s]

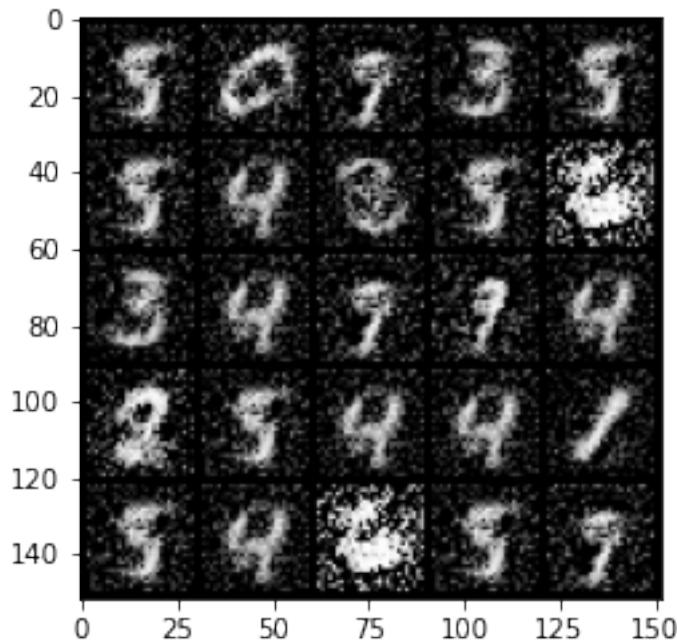
89%| 416/469 [00:11<00:01, 35.78it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

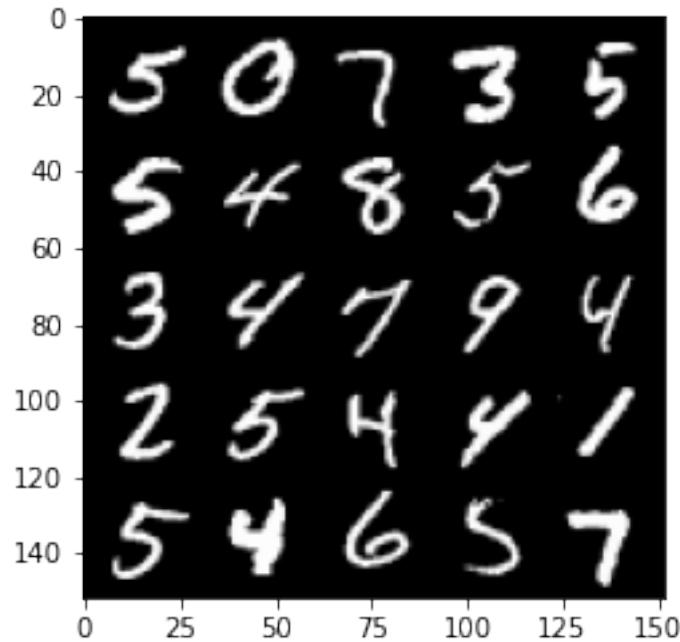
Epoch 207, step 97500 -> generator loss: 0.4645106858611105, discriminator loss: 0.6708401054143911



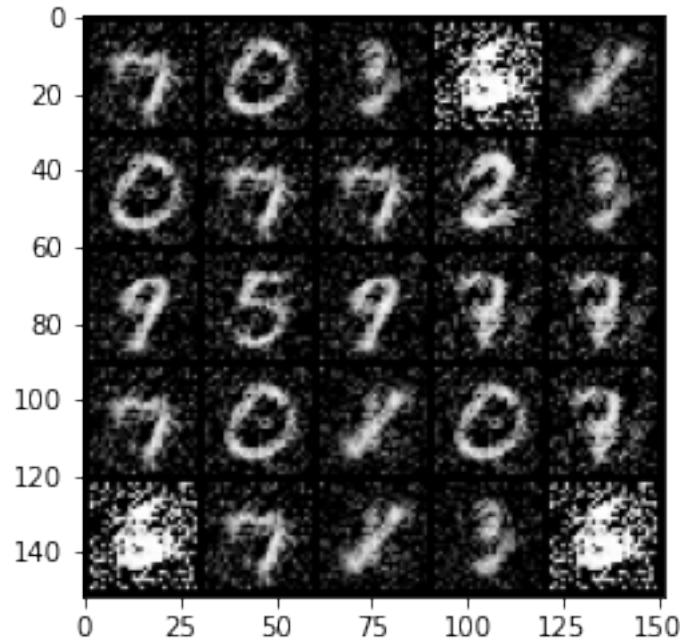
```
100%| 469/469 [00:13<00:00, 34.38it/s]
95%| 447/469 [00:12<00:00, 36.01it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

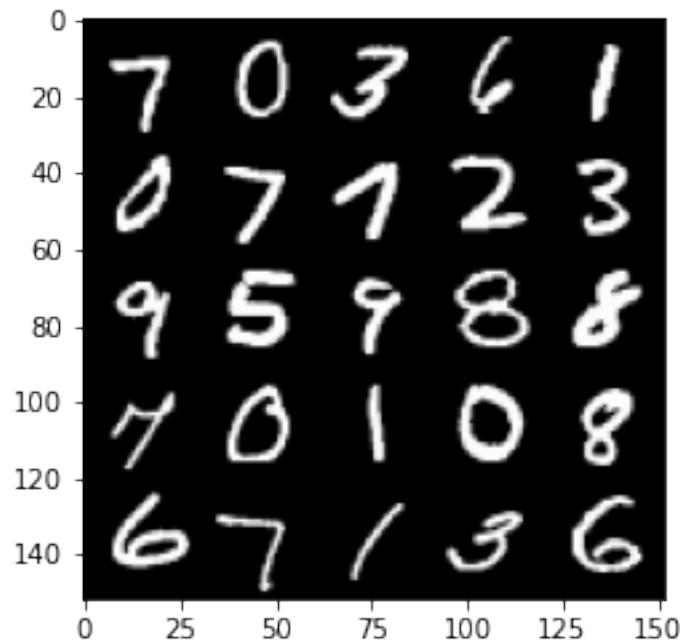
```
Epoch 208, step 98000 -> generator loss: 0.4760904498696329, discriminator loss:
0.6575447909831997
```





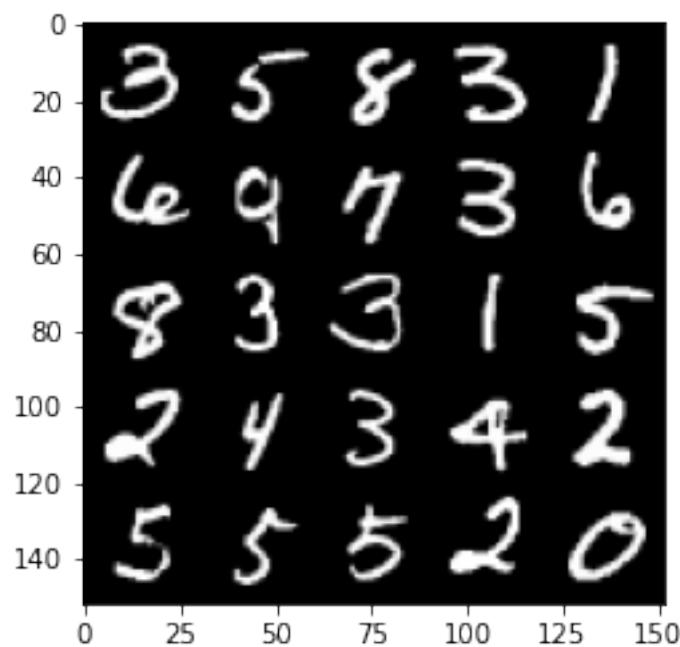
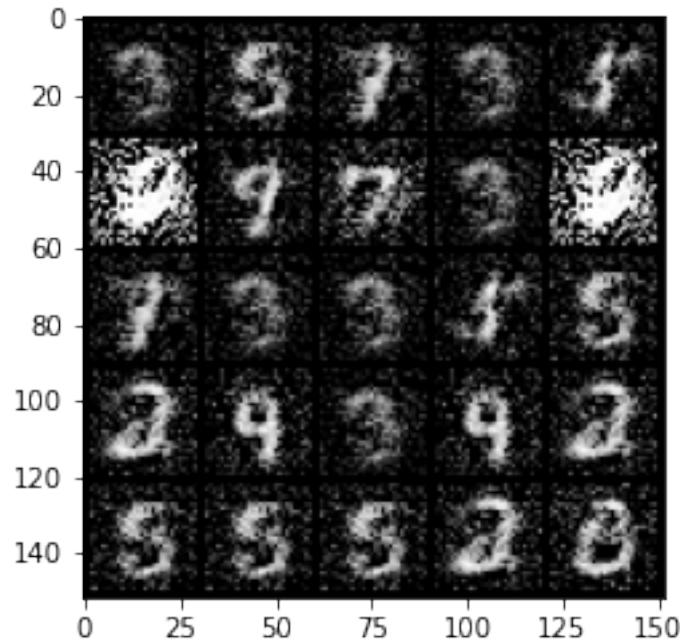
```
100%|    | 469/469 [00:13<00:00, 34.27it/s]
100%|    | 469/469 [00:13<00:00, 35.34it/s]
  2%|    | 8/469 [00:00<00:14, 31.55it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 210, step 98500 -> generator loss: 0.45504172933101633, discriminator
loss: 0.6853848328590394
```





```
100%| 469/469 [00:13<00:00, 34.48it/s]
 9%| 40/469 [00:01<00:12, 33.23it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

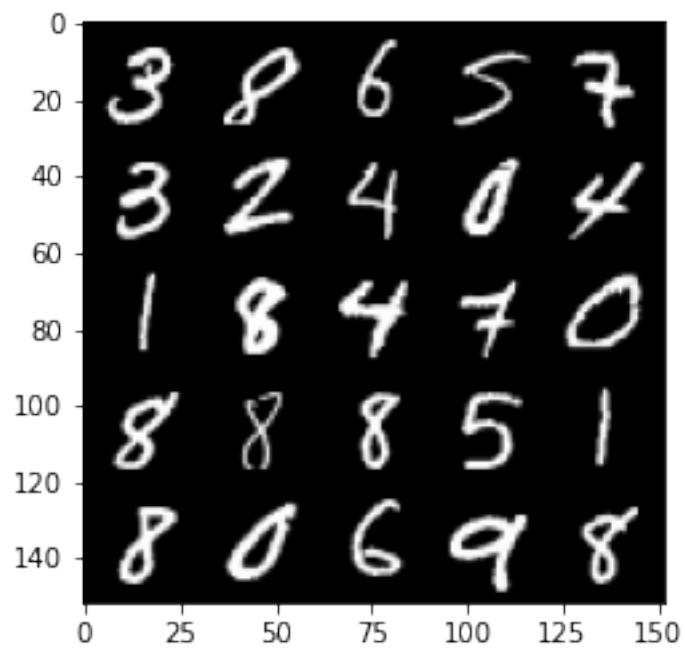
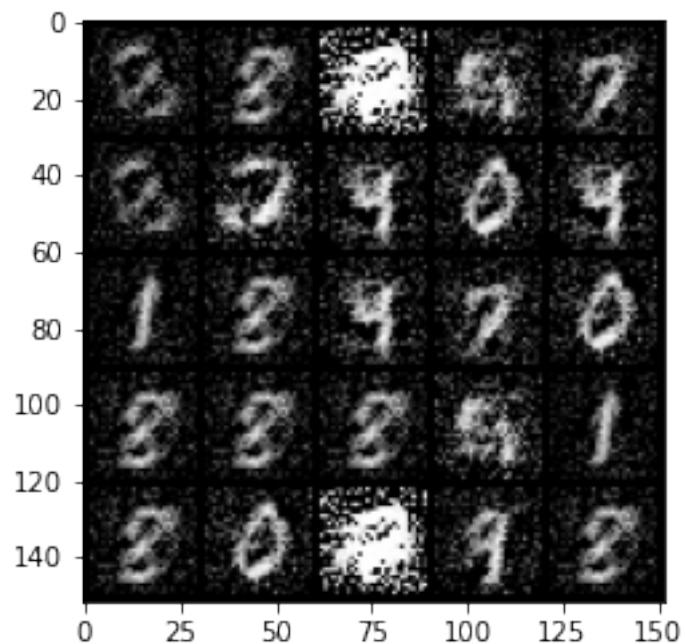
```
Epoch 211, step 99000 -> generator loss: 0.4691681651473047, discriminator loss:
0.6668350178003315
```



100% | 469/469 [00:13<00:00, 34.32it/s]  
15% | 71/469 [00:02<00:10, 36.23it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 212, step 99500 -> generator loss: 0.45192651534080513, discriminator

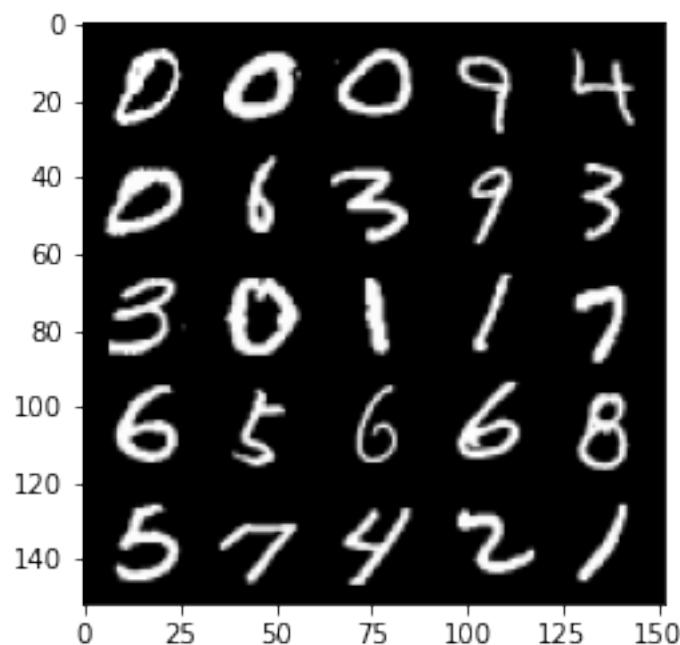
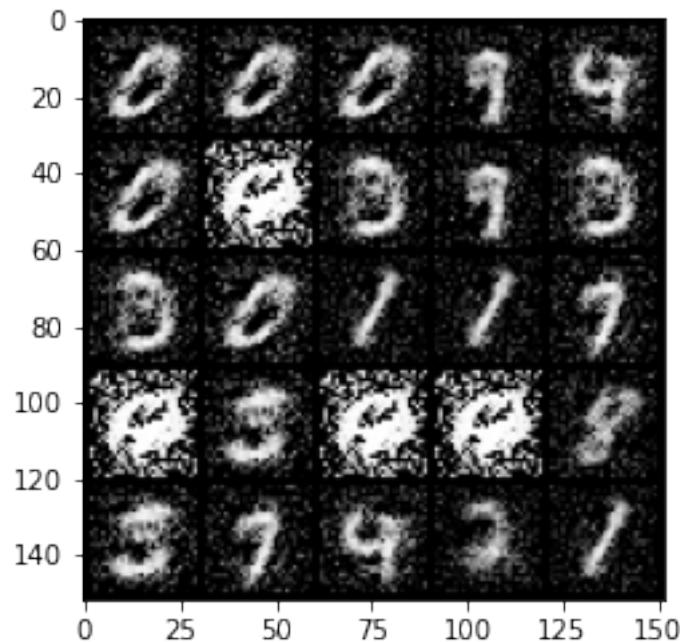
loss: 0.6879312216043473



100% | 469/469 [00:13<00:00, 34.49it/s]  
22% | 102/469 [00:02<00:11, 33.25it/s] Clipping input data to the

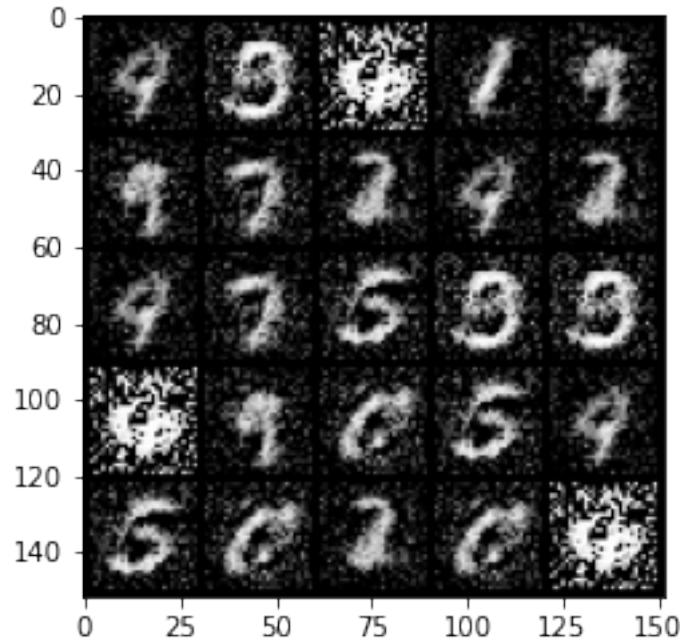
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

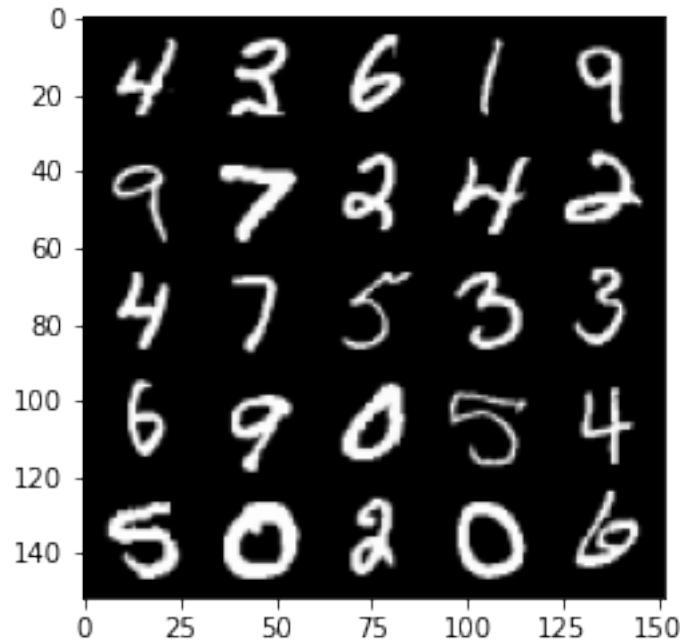
Epoch 213, step 100000 -> generator loss: 0.4588477708101273, discriminator loss: 0.6793052848577502



```
100%|      | 469/469 [00:13<00:00, 33.91it/s]
28%|      | 132/469 [00:03<00:09, 36.08it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

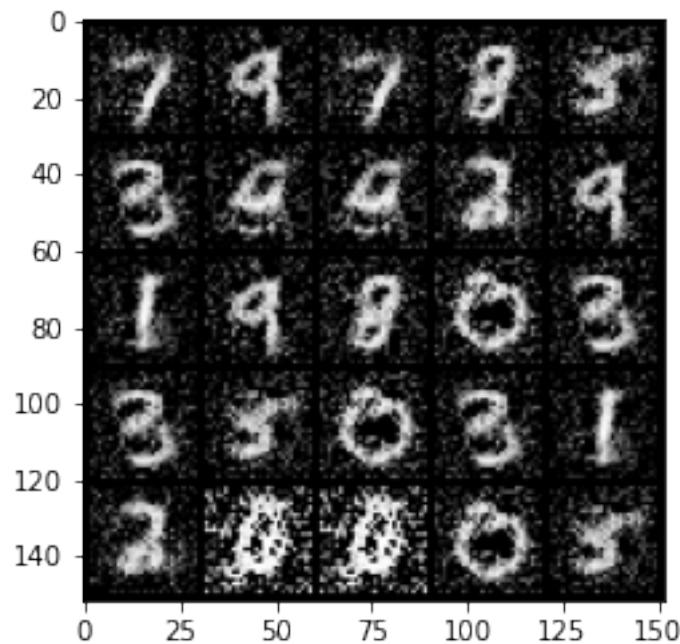
Epoch 214, step 100500 -> generator loss: 0.4629420276880262, discriminator  
loss: 0.6839003571271899

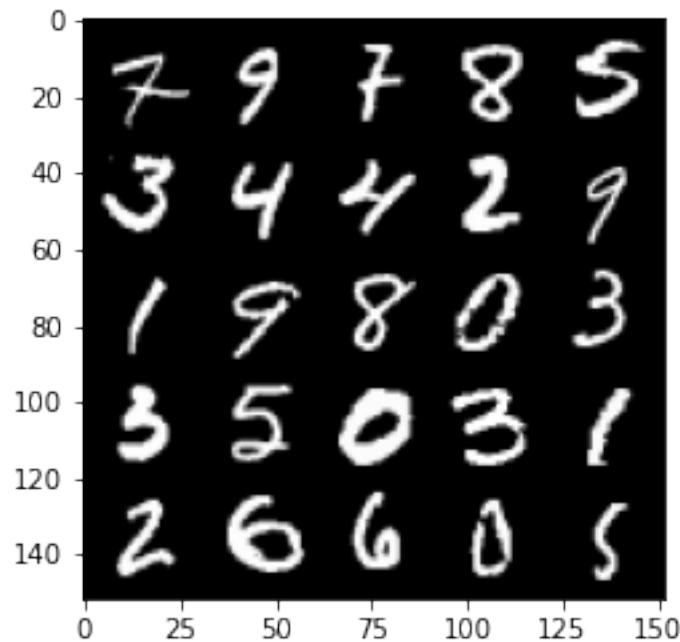




```
100%|      | 469/469 [00:13<00:00, 34.42it/s]
35%|      | 162/469 [00:04<00:08, 35.98it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

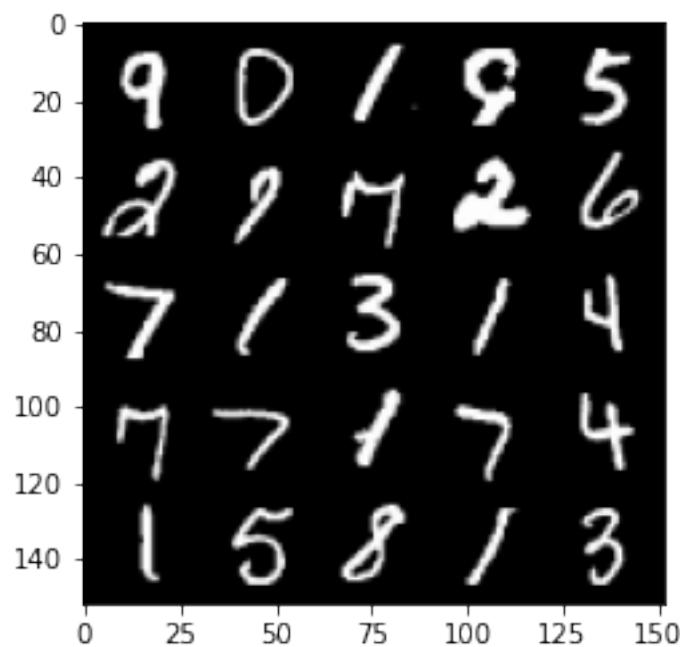
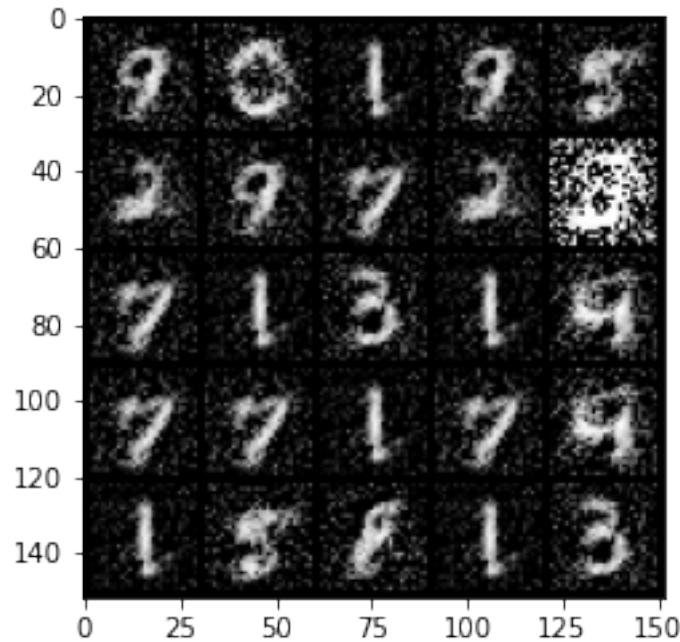
```
Epoch 215, step 101000 -> generator loss: 0.4544492387771607, discriminator
loss: 0.6901111012697216
```





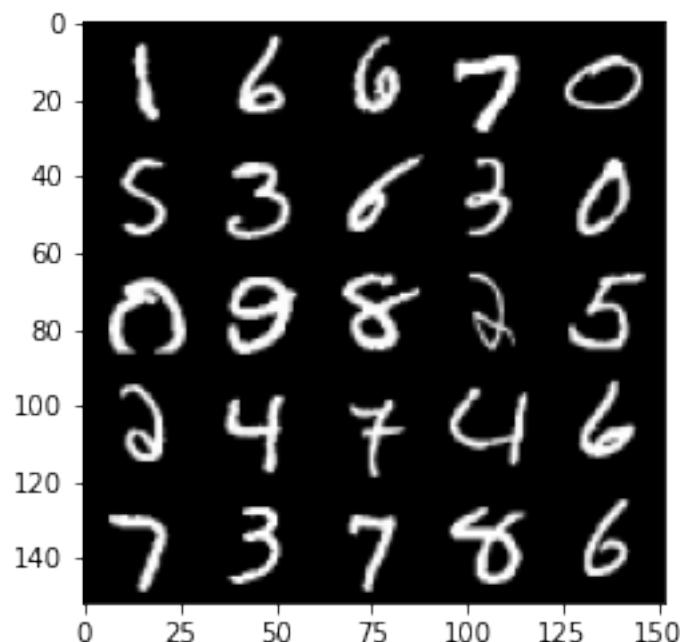
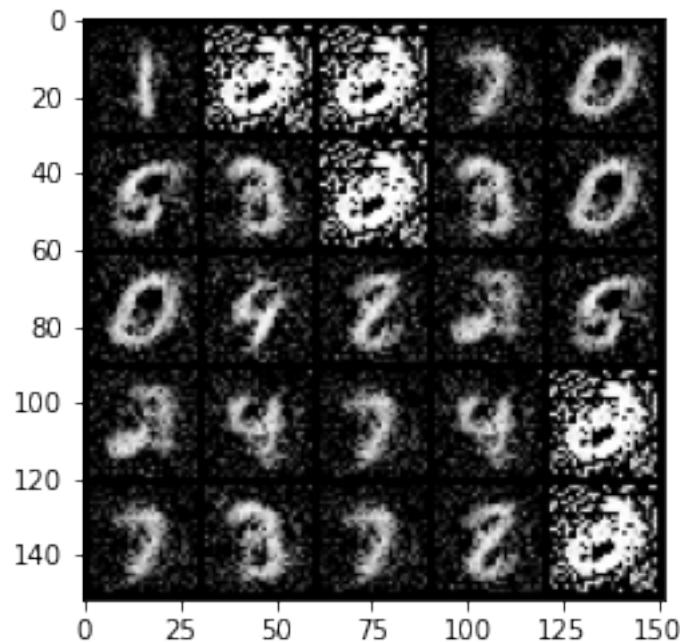
```
100%|      | 469/469 [00:13<00:00, 34.52it/s]
42%|      | 196/469 [00:05<00:07, 35.26it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 216, step 101500 -> generator loss: 0.45313313758373264, discriminator
loss: 0.6991441042423246
```



100% | 469/469 [00:13<00:00, 34.53it/s]  
48% | 226/469 [00:06<00:06, 35.78it/s] Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).

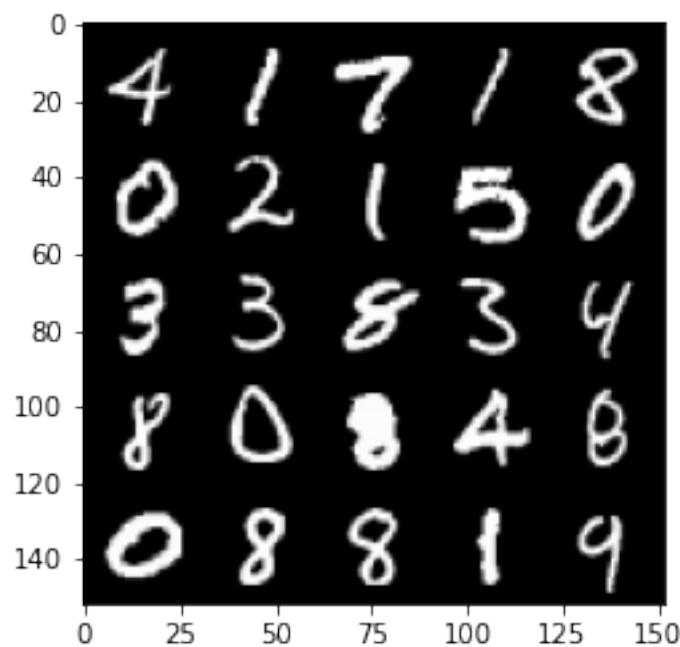
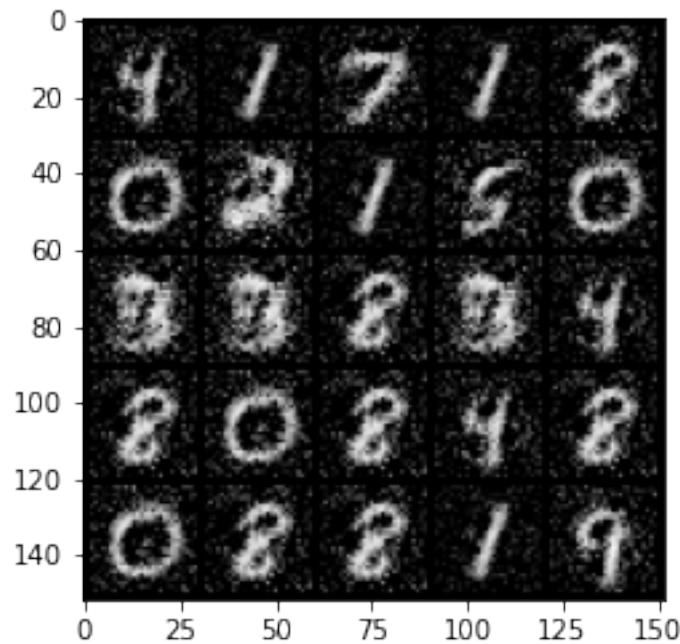
Epoch 217, step 102000 -> generator loss: 0.45768799358606305, discriminator loss: 0.6896607458591459



100% | 469/469 [00:13<00:00, 34.45it/s]

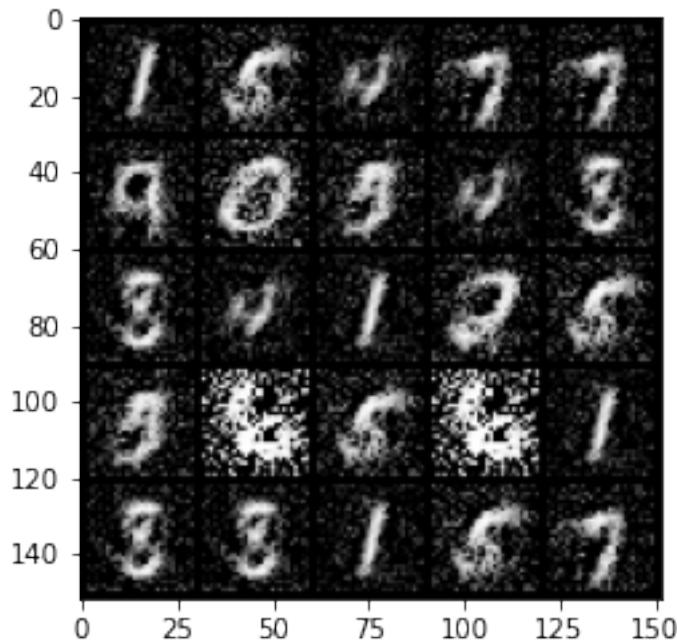
54%| 255/469 [00:07<00:05, 35.78it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

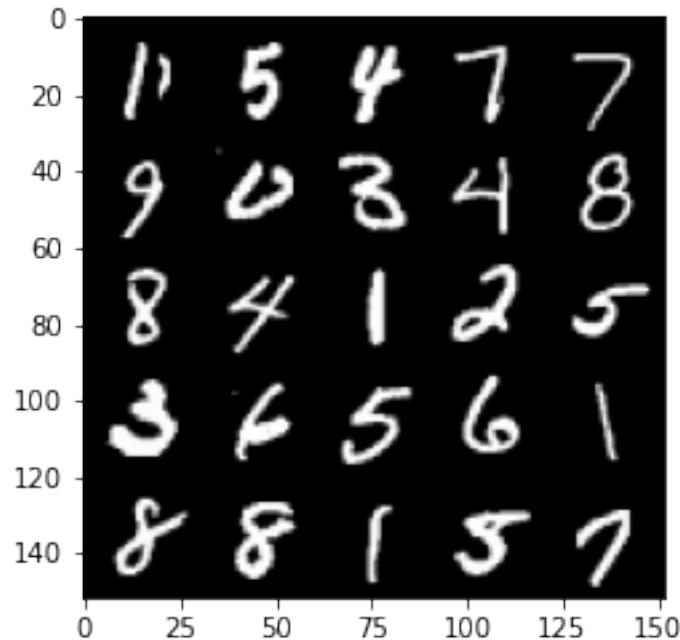
Epoch 218, step 102500 -> generator loss: 0.4581541908383373, discriminator loss: 0.6898097013235094



```
100%|      | 469/469 [00:13<00:00, 34.45it/s]
61%|      | 286/469 [00:08<00:05, 32.12it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

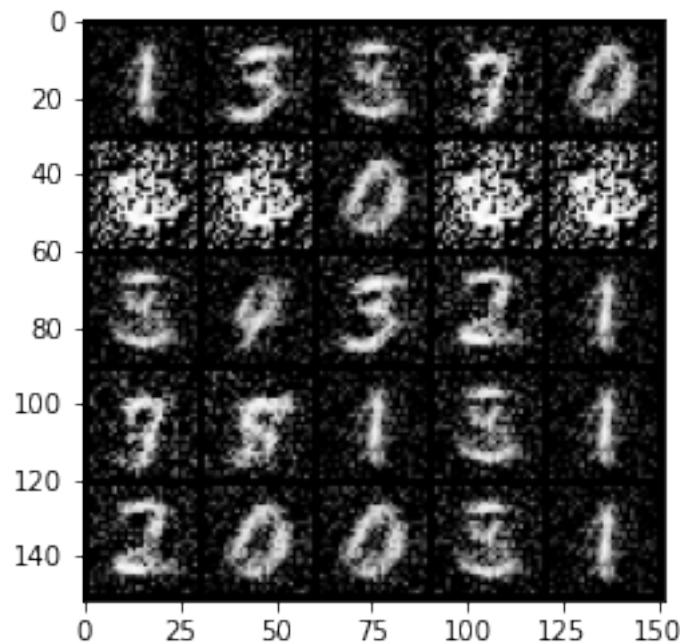
Epoch 219, step 103000 -> generator loss: 0.4595947641134263, discriminator loss: 0.6881419405937196

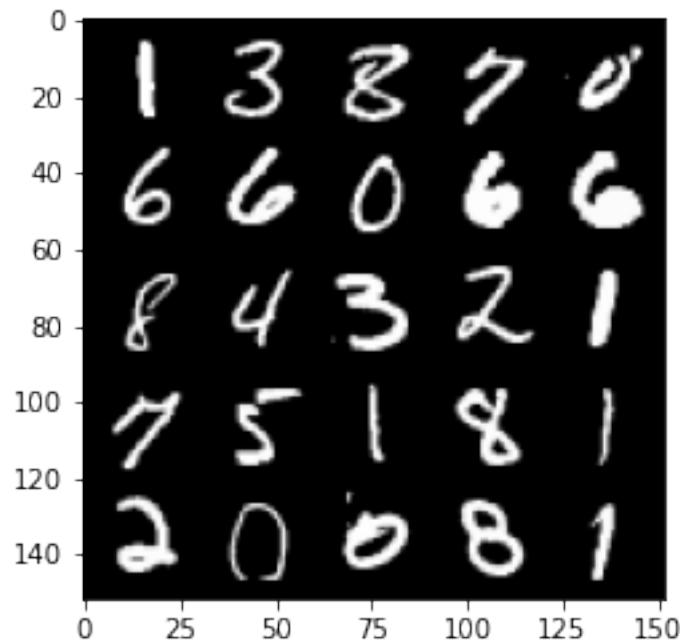




```
100%|      | 469/469 [00:13<00:00, 34.66it/s]
68%|      | 319/469 [00:08<00:04, 35.78it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

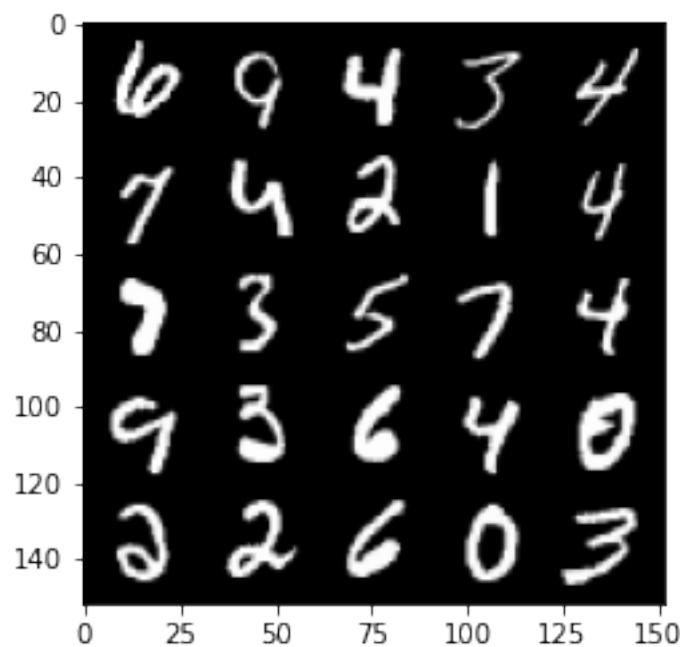
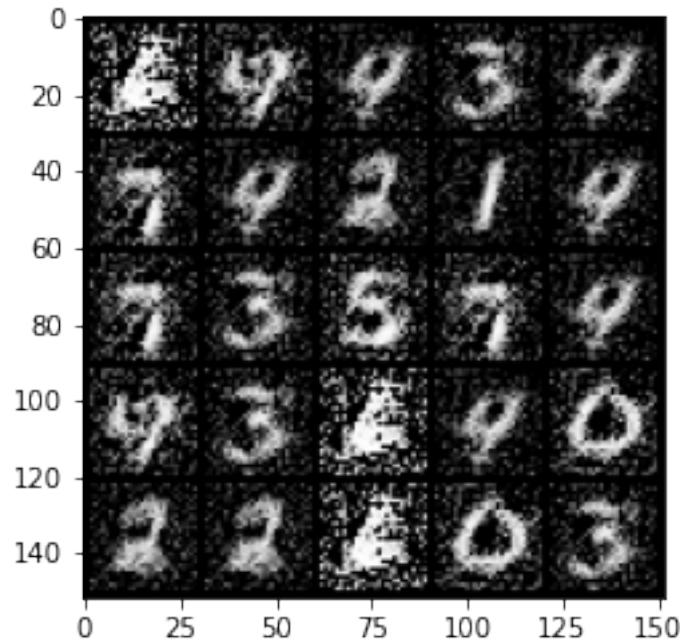
Epoch 220, step 103500 -> generator loss: 0.45494943332672133, discriminator loss: 0.6948172746896747





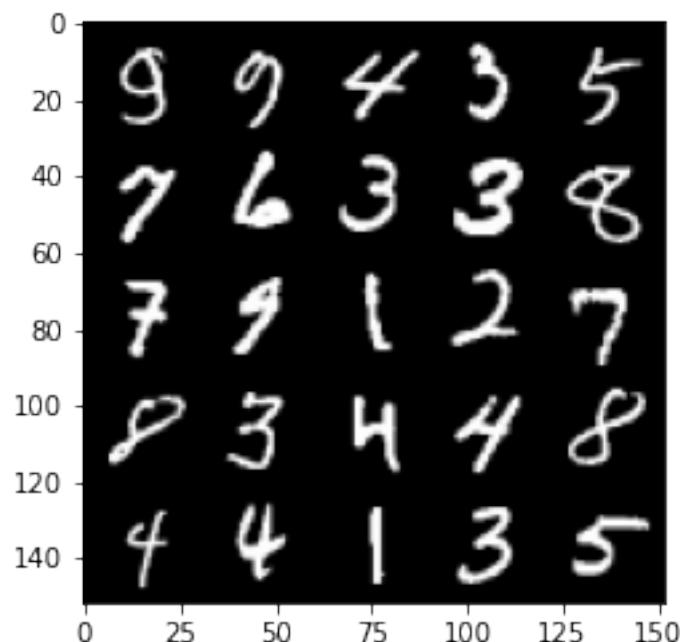
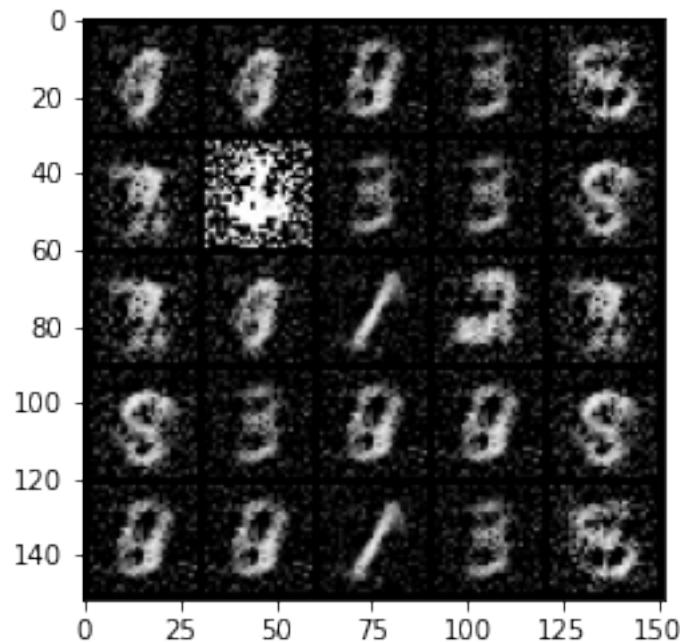
```
100% | 469/469 [00:13<00:00, 34.53it/s]
75% | 351/469 [00:09<00:03, 34.64it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 221, step 104000 -> generator loss: 0.4606403906941416, discriminator
loss: 0.6838976325988768
```



```
100%|     | 469/469 [00:13<00:00, 34.43it/s]
81%|     | 379/469 [00:10<00:02, 35.40it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

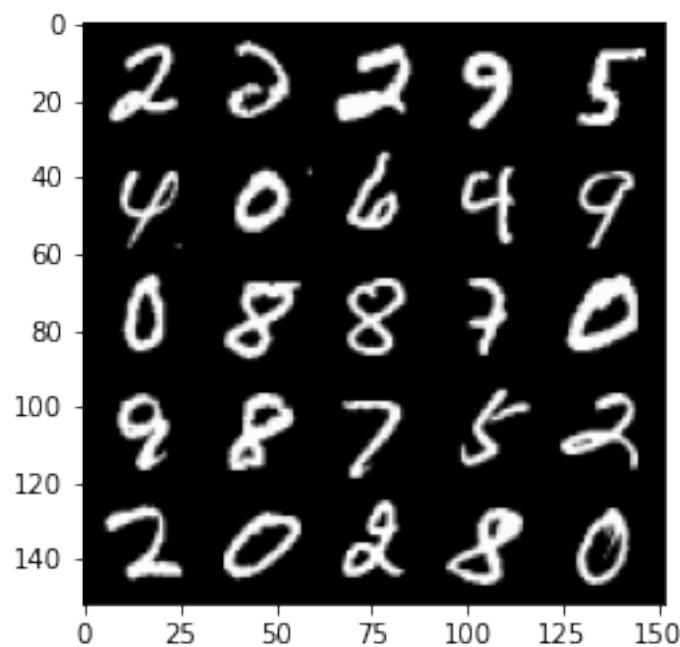
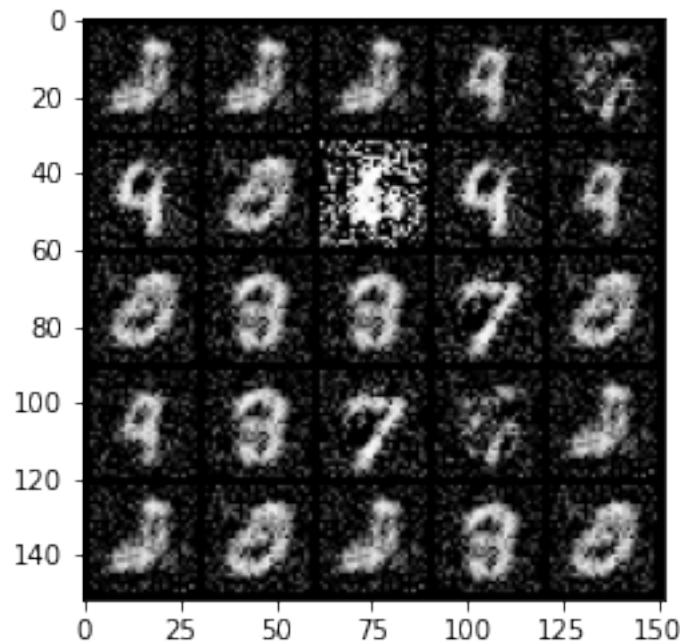
Epoch 222, step 104500 -> generator loss: 0.4444220016598701, discriminator loss: 0.7030177906751637



100% | 469/469 [00:13<00:00, 34.42it/s]

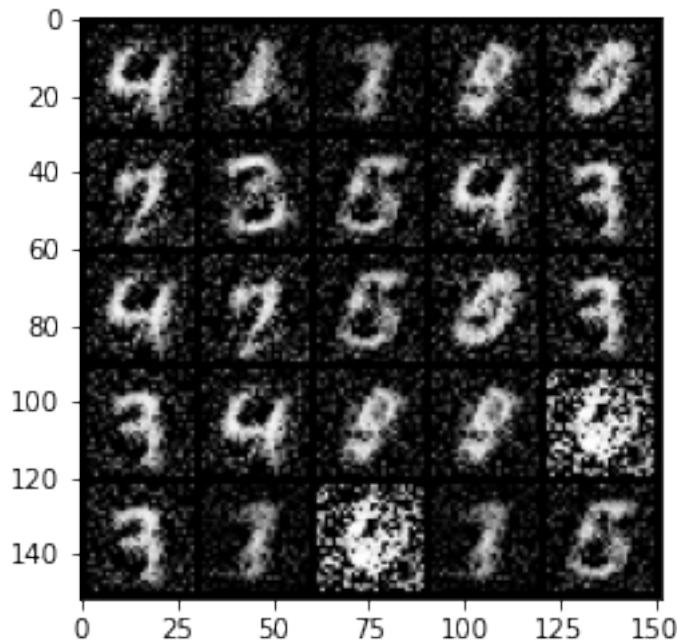
88%| 411/469 [00:11<00:01, 36.33it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

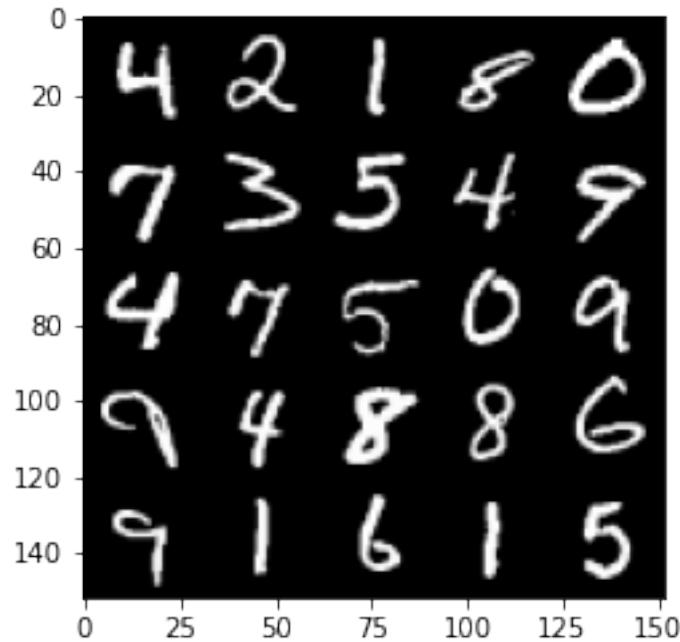
Epoch 223, step 105000 -> generator loss: 0.4611082648038866, discriminator loss: 0.6798068916797637



```
100%|     | 469/469 [00:13<00:00, 34.63it/s]
94%|     | 442/469 [00:12<00:00, 36.11it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

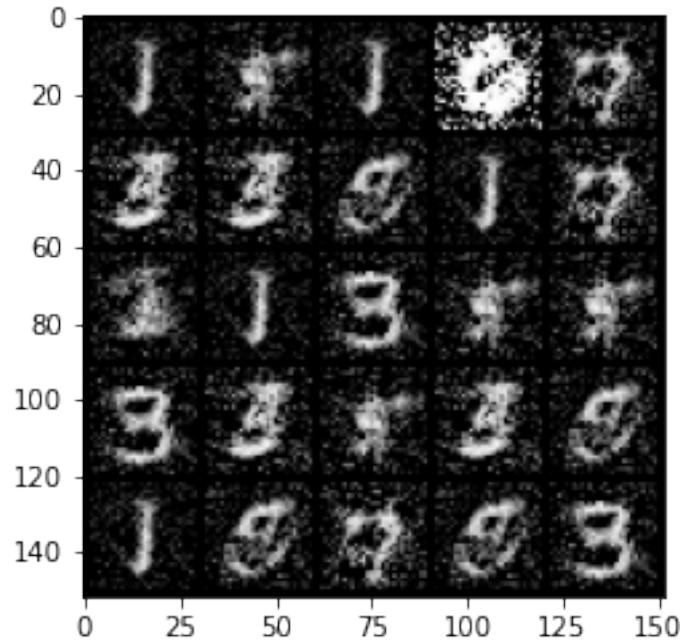
Epoch 224, step 105500 -> generator loss: 0.46482586675882337, discriminator loss: 0.6789046124219896

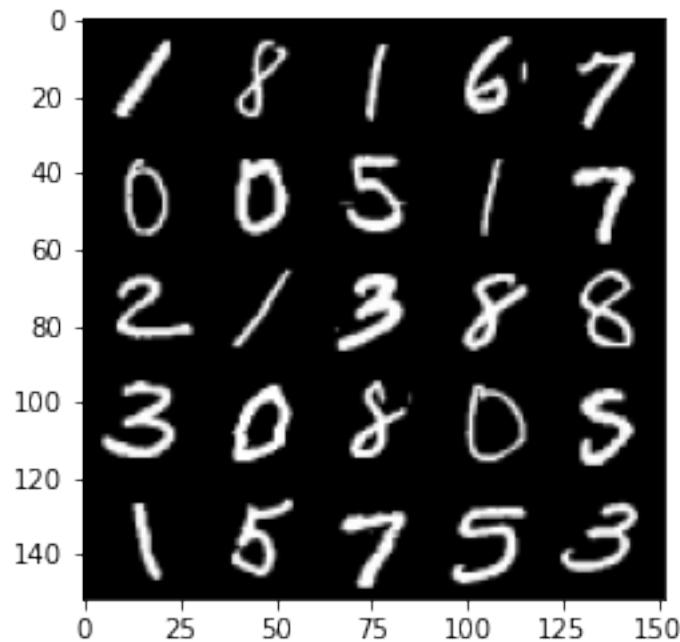




```
100%|    | 469/469 [00:13<00:00, 34.33it/s]
100%|    | 469/469 [00:13<00:00, 35.43it/s]
 1%|    | 4/469 [00:00<00:13, 33.71it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

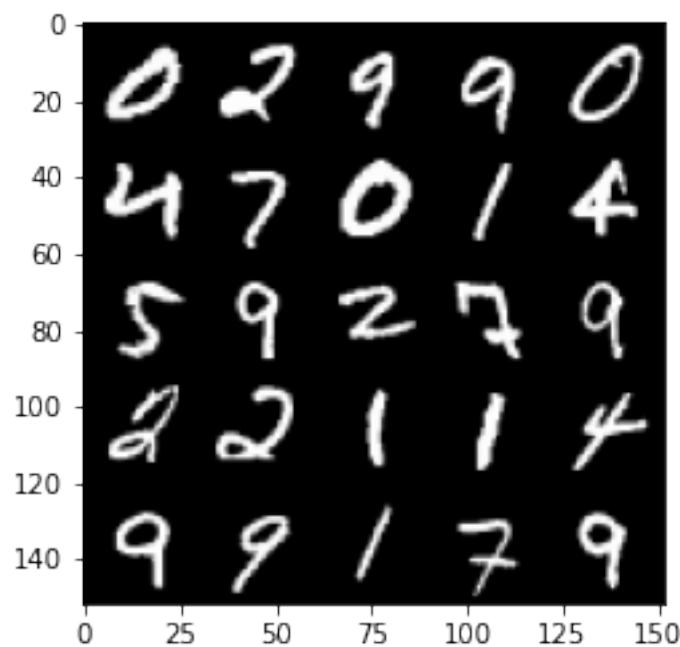
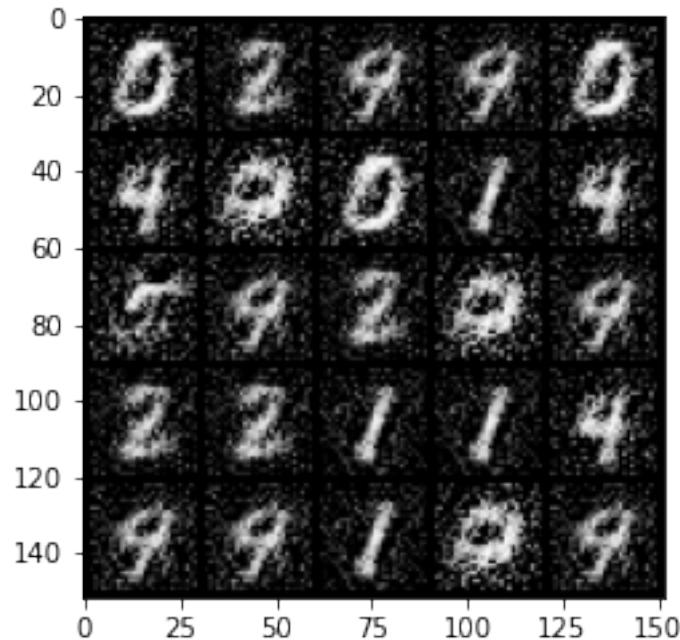
Epoch 226, step 106000 -> generator loss: 0.4539847160577773, discriminator
loss: 0.6931633924245834
```





```
100%| 469/469 [00:13<00:00, 34.54it/s]
 7%| 35/469 [00:01<00:13, 33.15it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

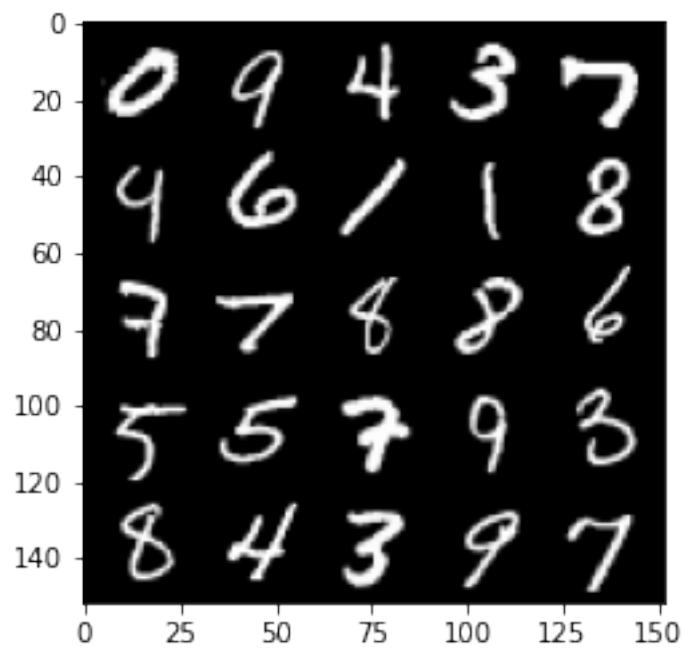
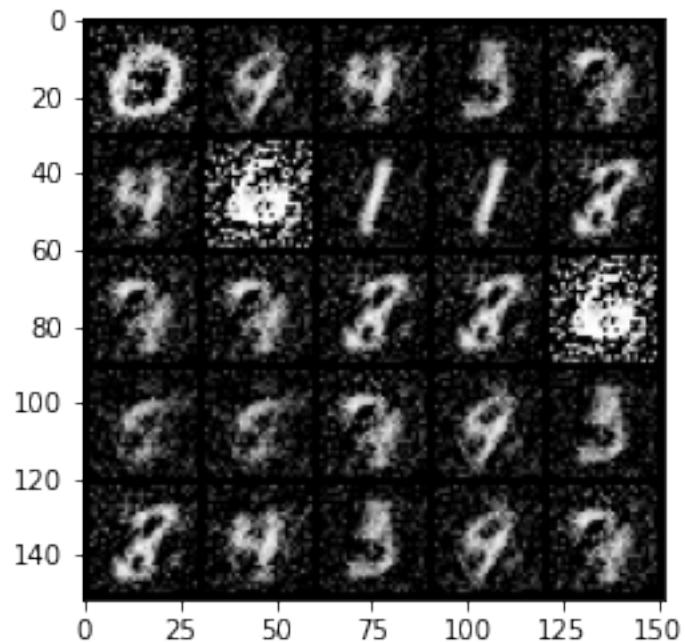
```
Epoch 227, step 106500 -> generator loss: 0.458888916015625, discriminator loss:
0.6839686430692677
```



```
100%| 469/469 [00:13<00:00, 34.38it/s]
14%| 67/469 [00:01<00:11, 36.50it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 228, step 107000 -> generator loss: 0.4576048302054402, discriminator

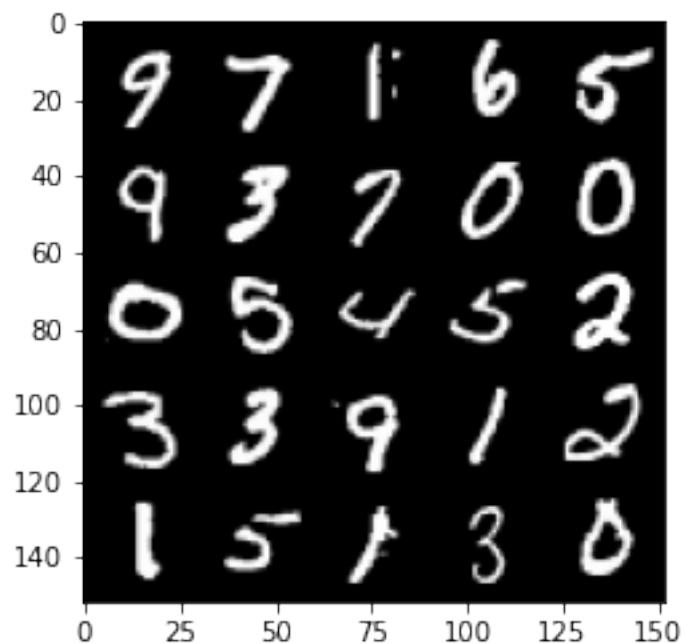
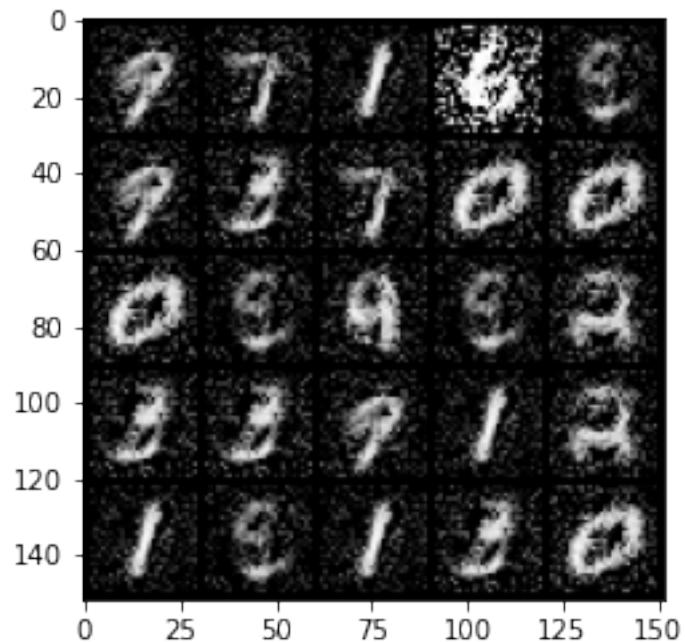
loss: 0.6878946979045866



100% | 469/469 [00:13<00:00, 34.49it/s]  
20% | 96/469 [00:02<00:10, 35.95it/s] Clipping input data to the valid

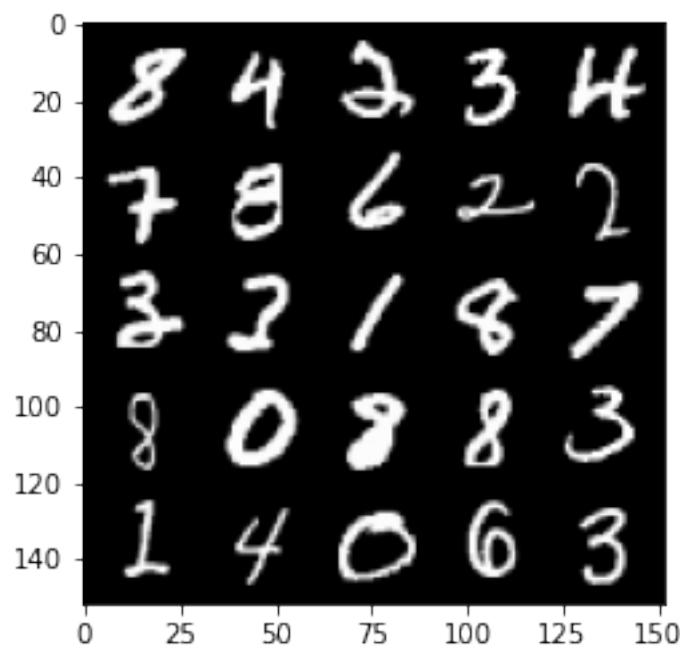
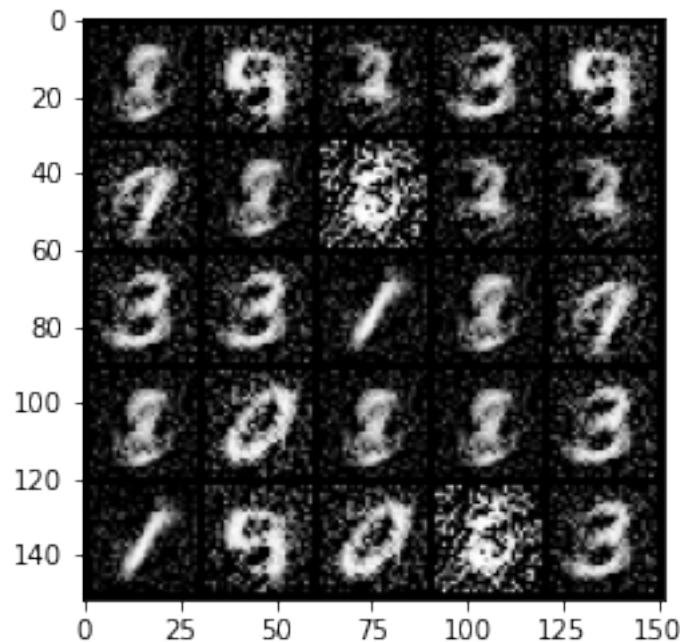
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 229, step 107500 -> generator loss: 0.4547966176271444, discriminator loss: 0.6863555322885517



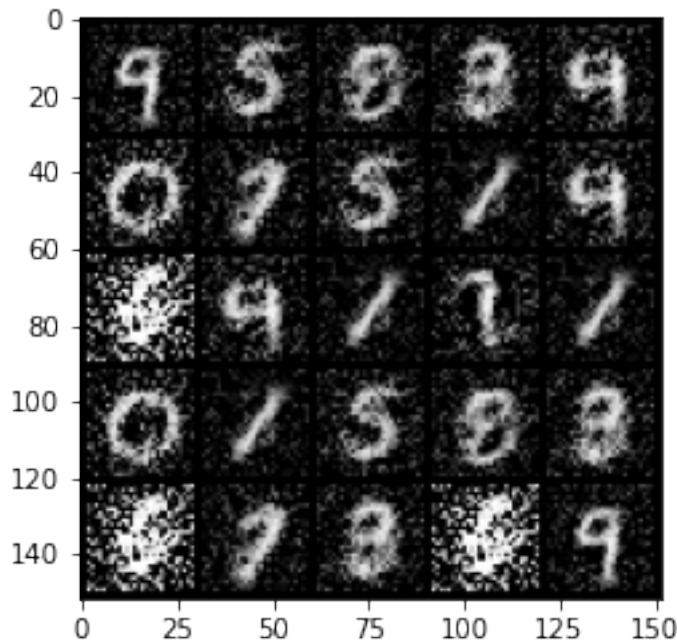
```
100%| 469/469 [00:13<00:00, 34.59it/s]
28%| 130/469 [00:03<00:09, 36.05it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

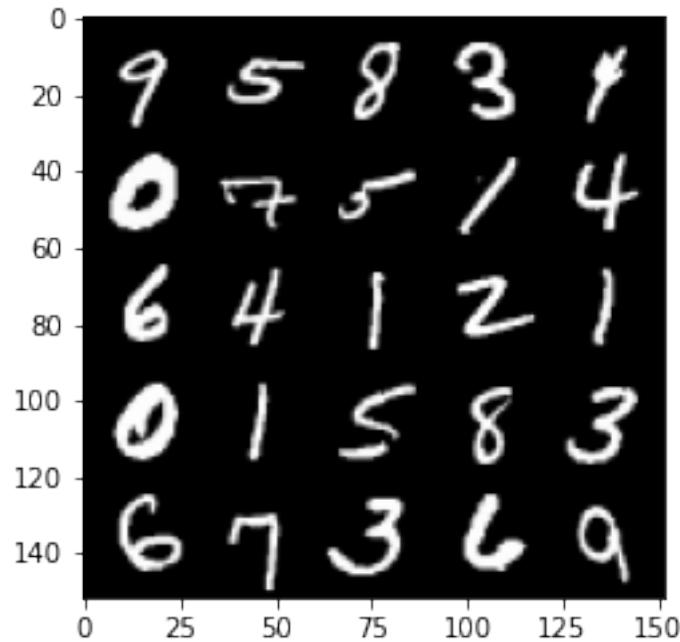
Epoch 230, step 108000 -> generator loss: 0.4602188576459882, discriminator loss: 0.6867718212604527



```
100%|      | 469/469 [00:13<00:00, 34.50it/s]
34%|      | 159/469 [00:04<00:08, 35.94it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

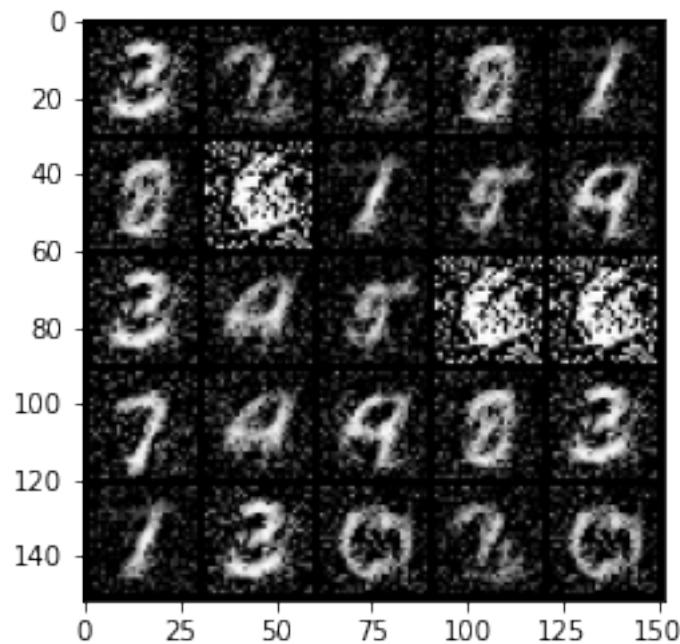
```
Epoch 231, step 108500 -> generator loss: 0.45987920725345605, discriminator
loss: 0.6922438719272607
```

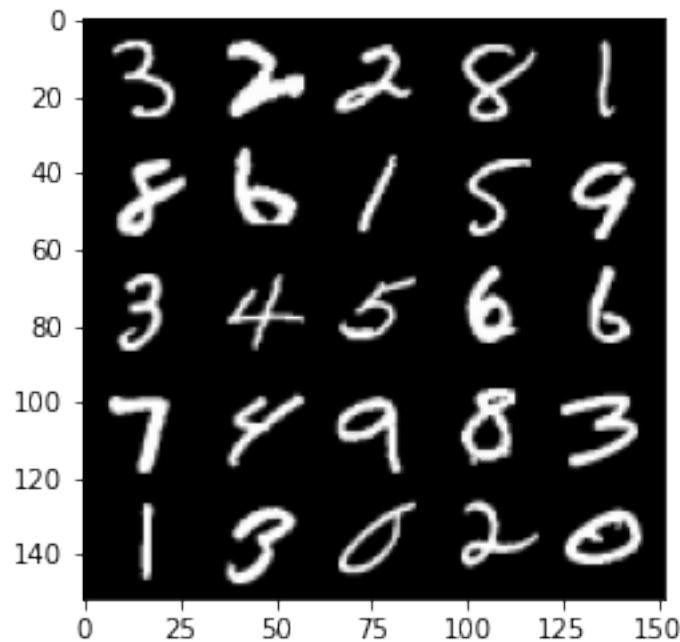




```
100%|      | 469/469 [00:13<00:00, 34.52it/s]
41%|      | 191/469 [00:05<00:07, 36.44it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

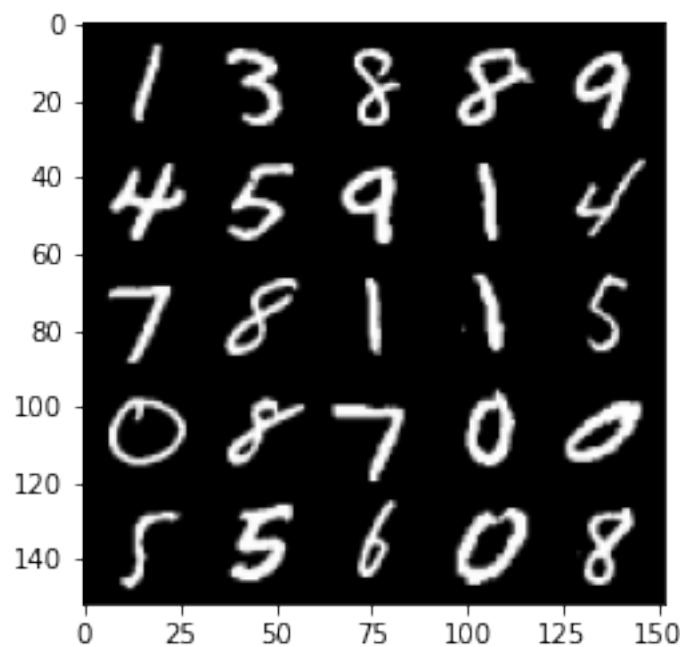
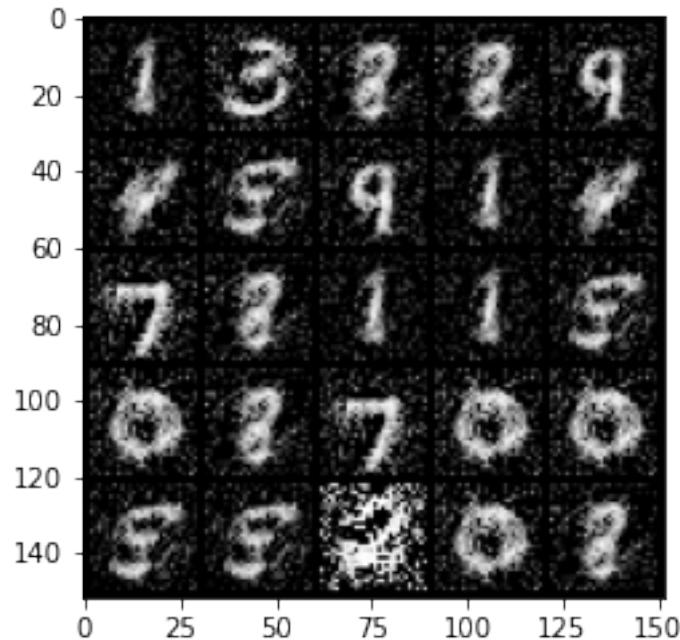
```
Epoch 232, step 109000 -> generator loss: 0.4668658187985419, discriminator
loss: 0.6774231820106509
```





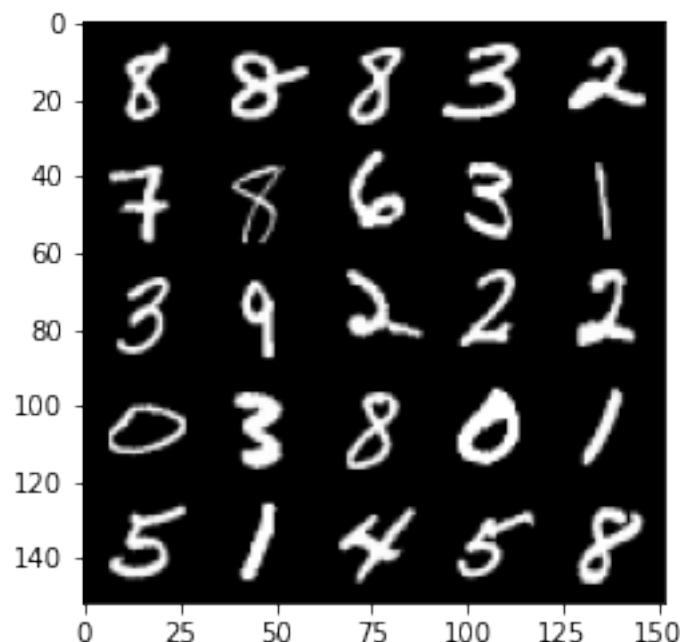
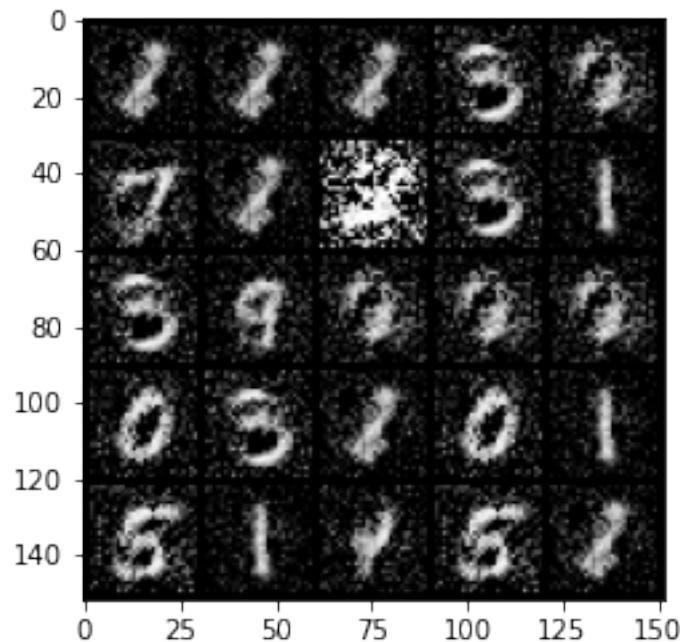
```
100%| 469/469 [00:13<00:00, 34.46it/s]
47%| 220/469 [00:06<00:07, 33.05it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 233, step 109500 -> generator loss: 0.4619224567413322, discriminator
loss: 0.677076883554458
```



100% | 469/469 [00:13<00:00, 34.57it/s]  
54% | 251/469 [00:07<00:06, 36.14it/s]Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).

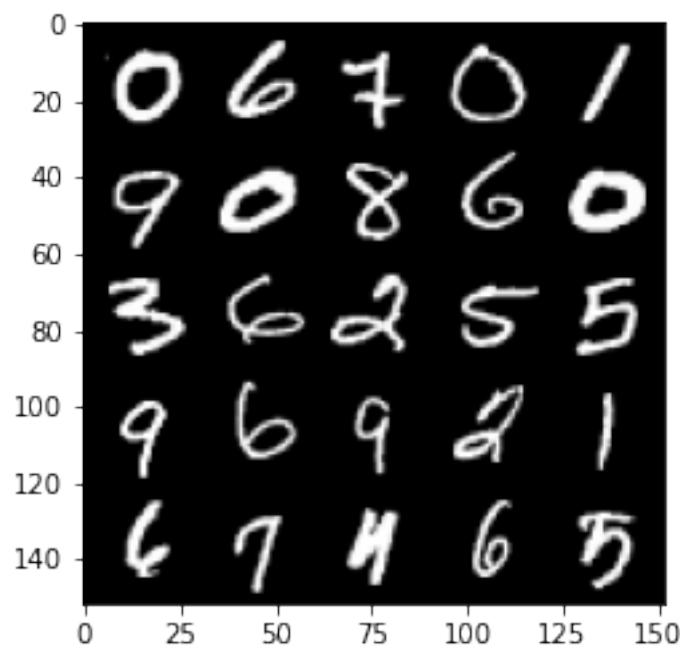
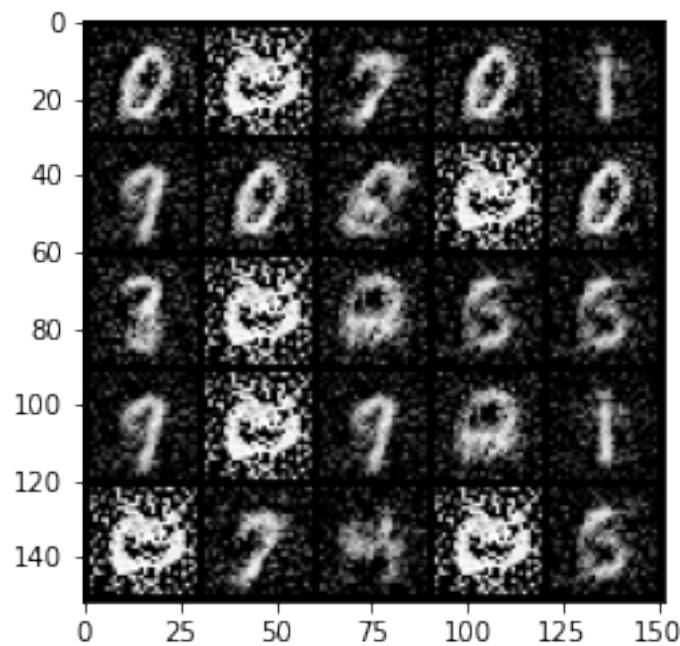
Epoch 234, step 110000 -> generator loss: 0.45275447261333496, discriminator loss: 0.6853020981550213



100% | 469/469 [00:13<00:00, 34.49it/s]

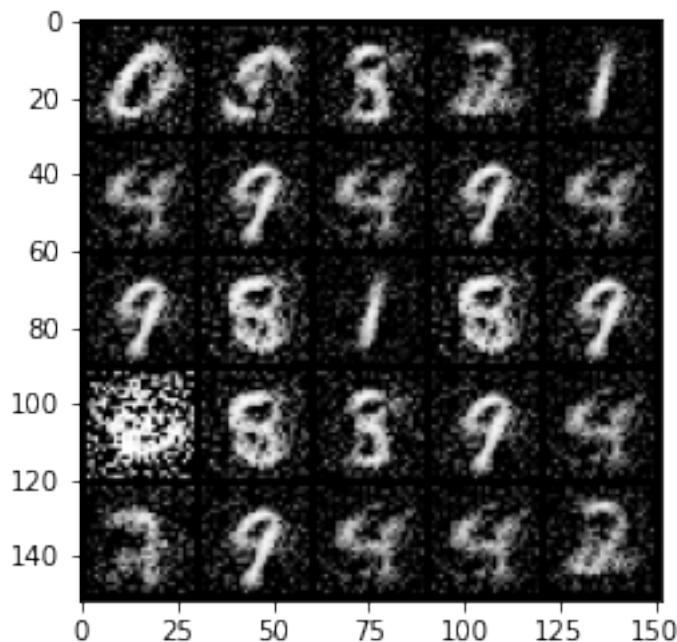
60%| 282/469 [00:07<00:05, 36.41it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

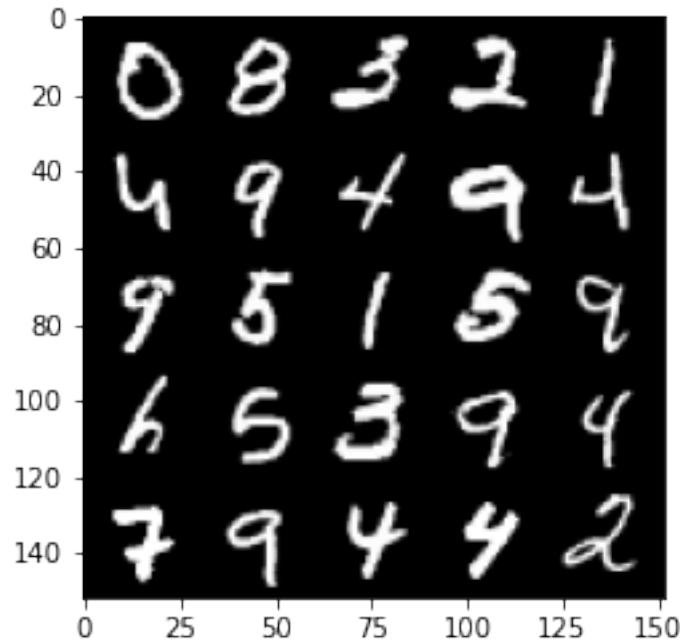
Epoch 235, step 110500 -> generator loss: 0.46367943626642216, discriminator loss: 0.6673015702962865



```
100%|      | 469/469 [00:13<00:00, 34.14it/s]
67%|      | 315/469 [00:09<00:04, 34.31it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

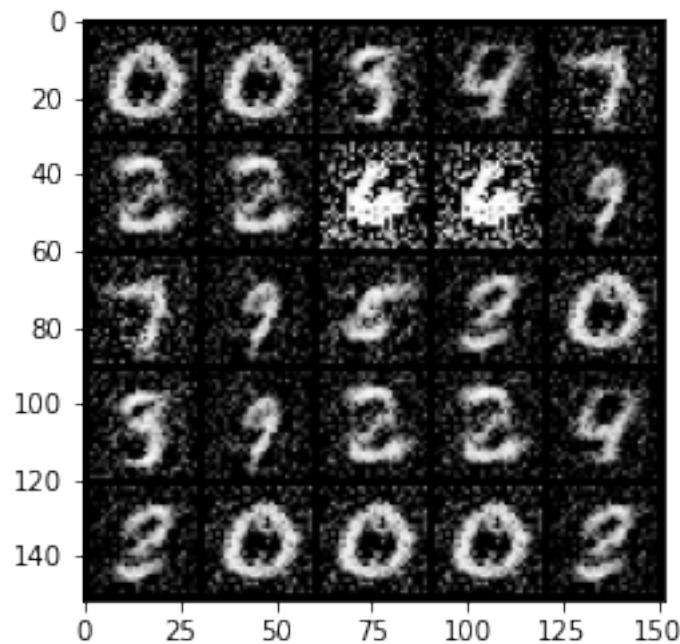
```
Epoch 236, step 111000 -> generator loss: 0.45625335365533864, discriminator
loss: 0.6956980984210968
```

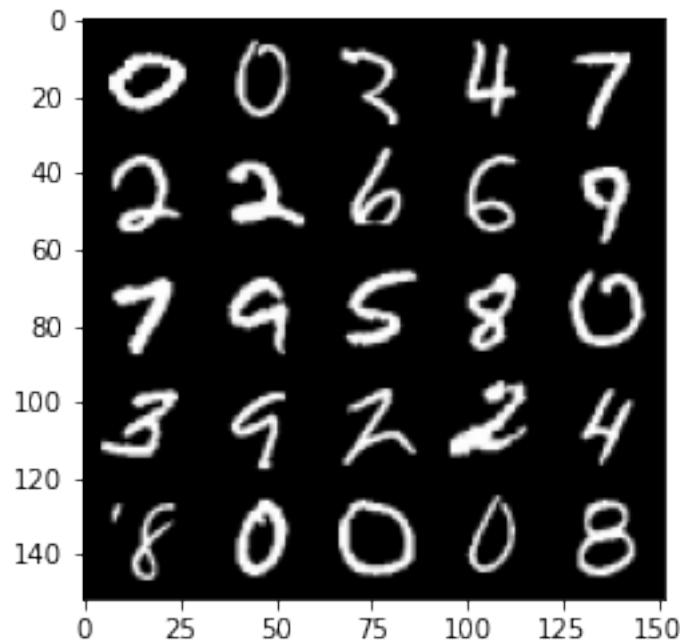




```
100%|      | 469/469 [00:14<00:00, 32.30it/s]
74%|      | 346/469 [00:10<00:03, 36.25it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

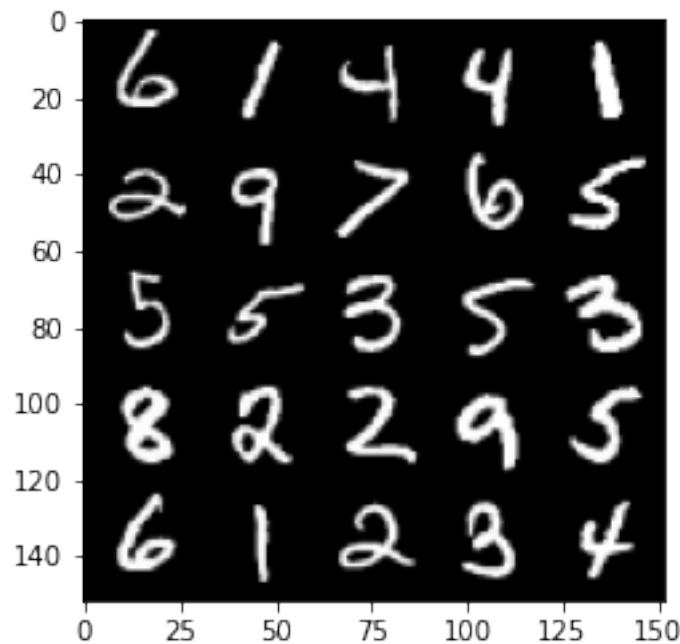
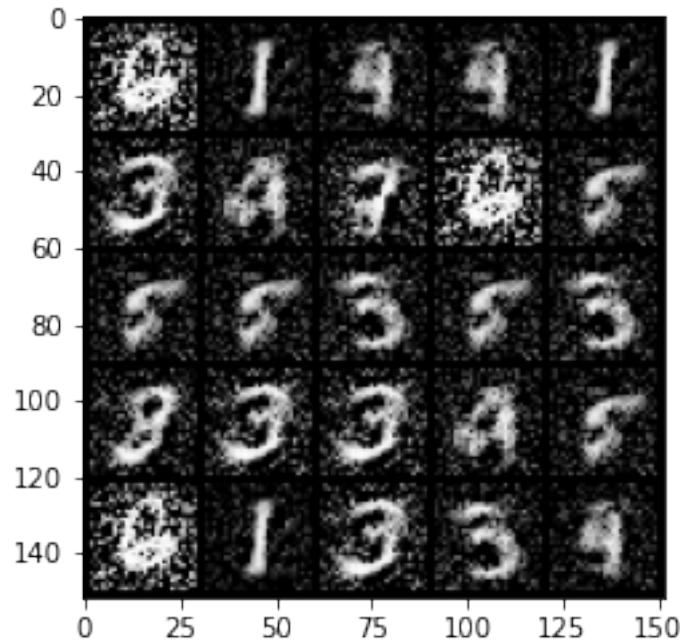
```
Epoch 237, step 111500 -> generator loss: 0.45249492251873014, discriminator
loss: 0.6994342626333234
```





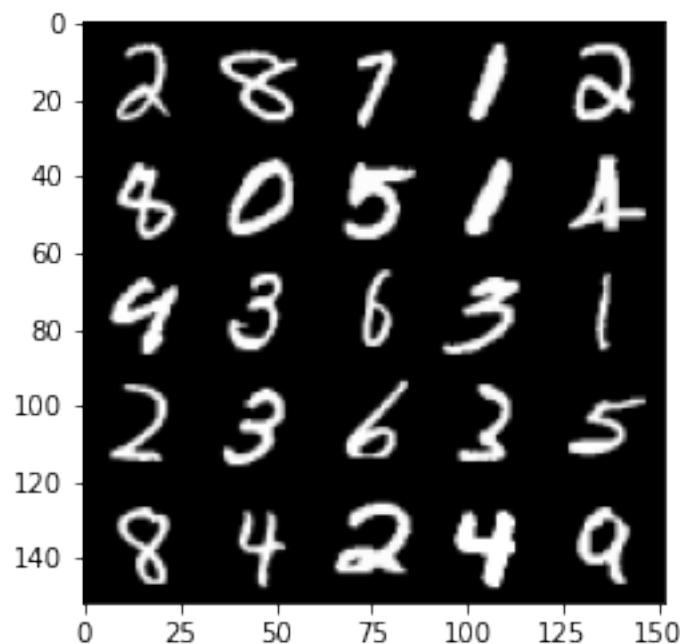
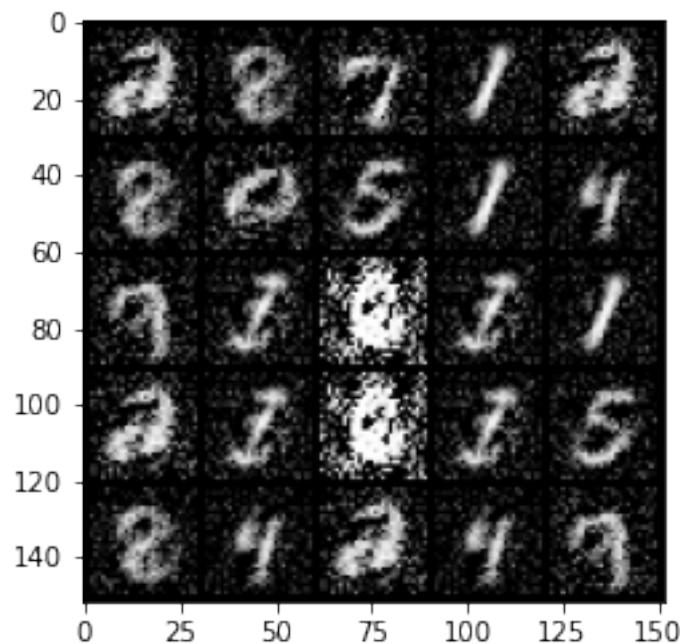
```
100%|     | 469/469 [00:13<00:00, 33.61it/s]
81%|     | 378/469 [00:10<00:02, 36.37it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 238, step 112000 -> generator loss: 0.4573226478099823, discriminator loss: 0.6920374735593788



100% | 469/469 [00:13<00:00, 34.41it/s]  
87% | 408/469 [00:11<00:01, 35.99it/s] Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).

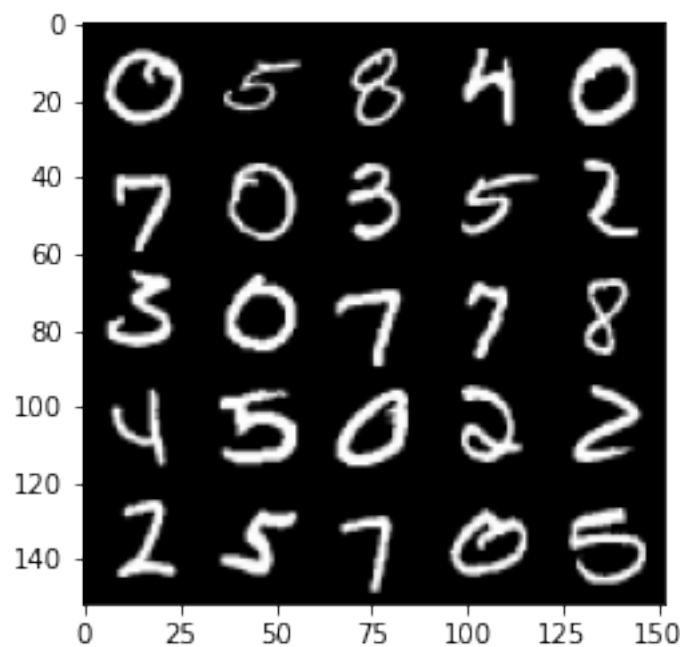
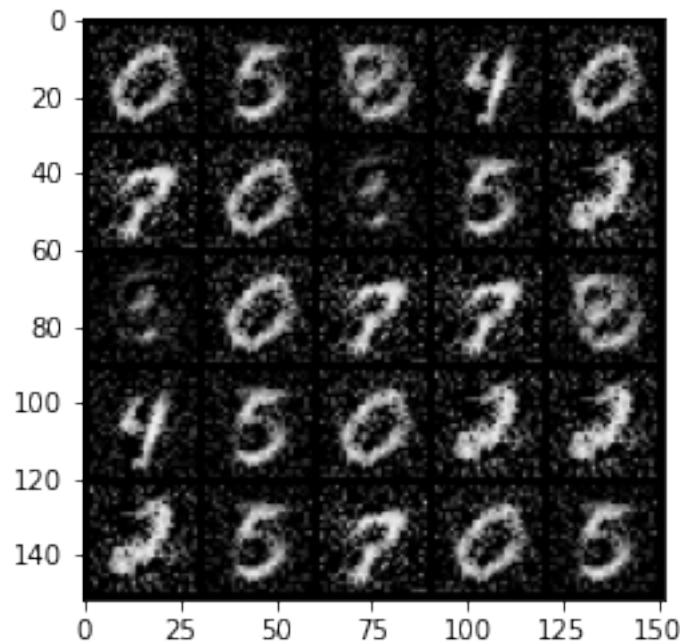
Epoch 239, step 112500 -> generator loss: 0.456406037330627, discriminator loss:  
0.6884109920263288



100% | 469/469 [00:13<00:00, 34.52it/s]

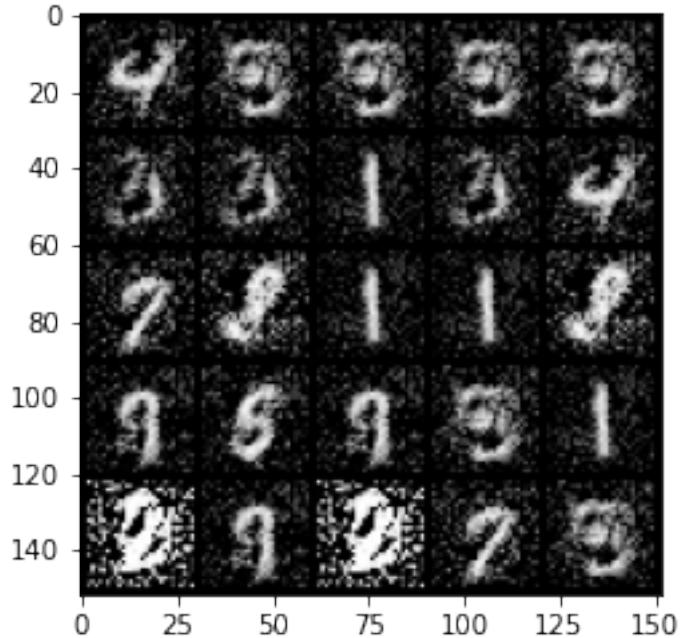
94%| 439/469 [00:12<00:00, 36.39it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

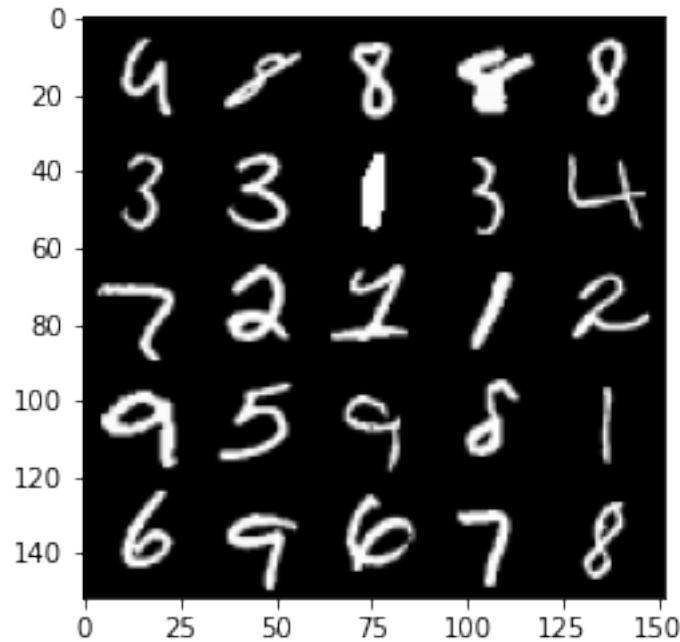
Epoch 240, step 113000 -> generator loss: 0.453733728945255, discriminator loss: 0.6840827189683915



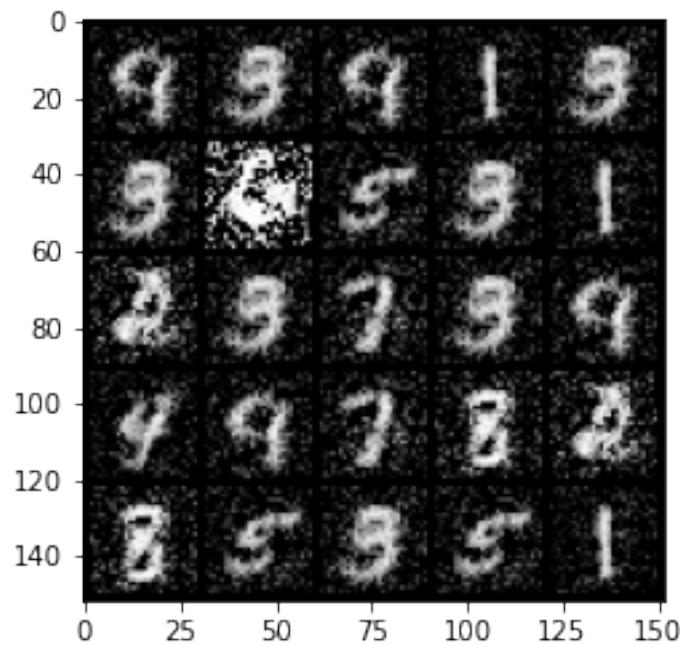
```
100%|    | 469/469 [00:13<00:00, 34.50it/s]
100%|    | 469/469 [00:13<00:00, 35.19it/s]
  0%|    | 0/469 [00:00<?, ?it/s]Clipping input data to the valid range
for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

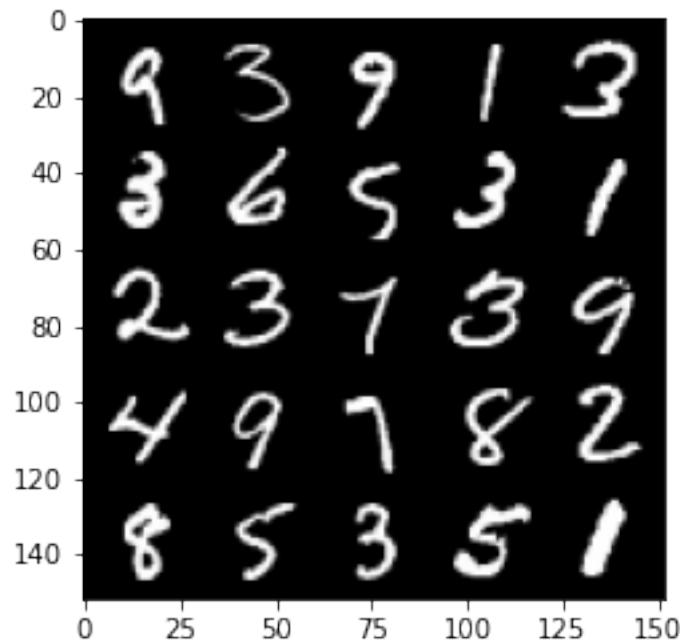
Epoch 242, step 113500 -> generator loss: 0.4660834109783171, discriminator loss: 0.6681630258560183



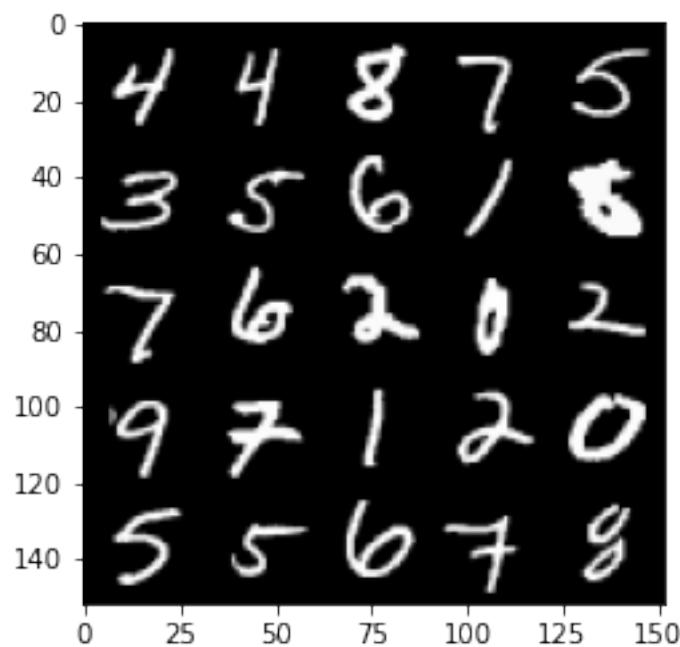
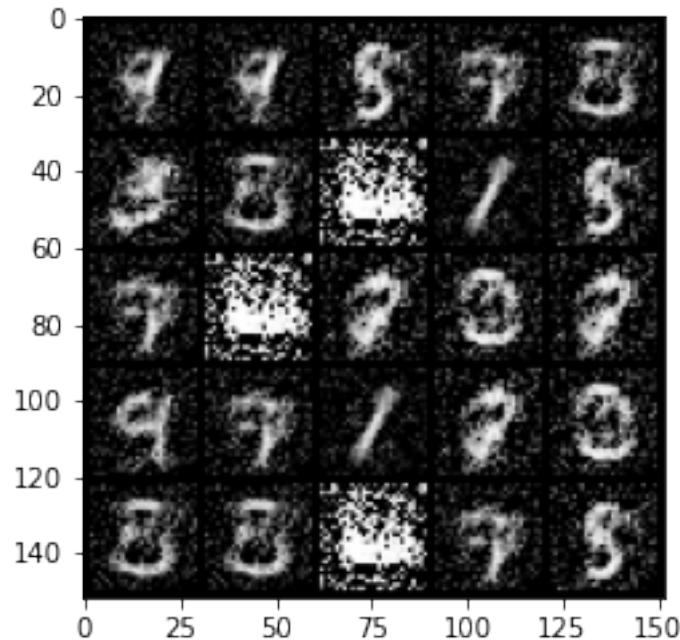


```
100%|      | 469/469 [00:13<00:00, 34.58it/s]
 7%|      | 31/469 [00:00<00:12, 36.20it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 243, step 114000 -> generator loss: 0.46369214177131673, discriminator
loss: 0.6791483652591704
```





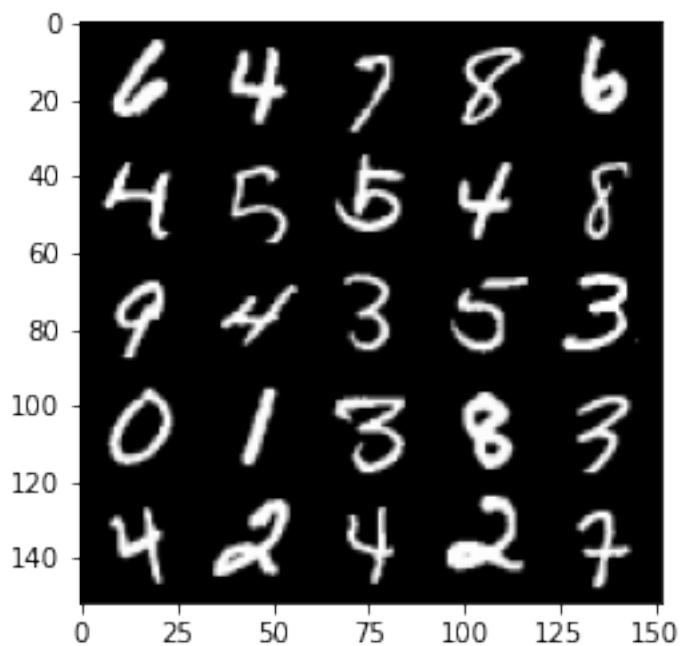
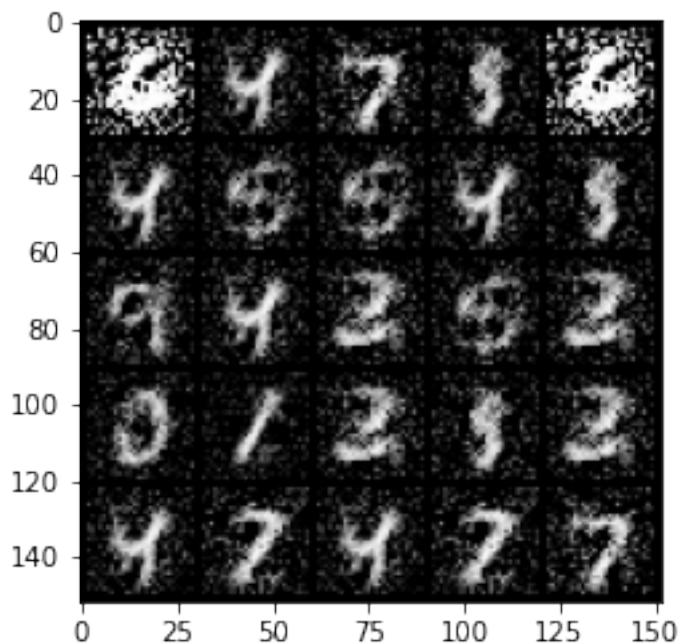
```
100% | 469/469 [00:13<00:00, 34.53it/s]
13% | 62/469 [00:01<00:11, 36.07it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 244, step 114500 -> generator loss: 0.46365546178817785, discriminator
loss: 0.6821165729761121
```



```
100% | 469/469 [00:13<00:00, 34.58it/s]
20% | 95/469 [00:02<00:10, 35.44it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 245, step 115000 -> generator loss: 0.46574841523170407, discriminator

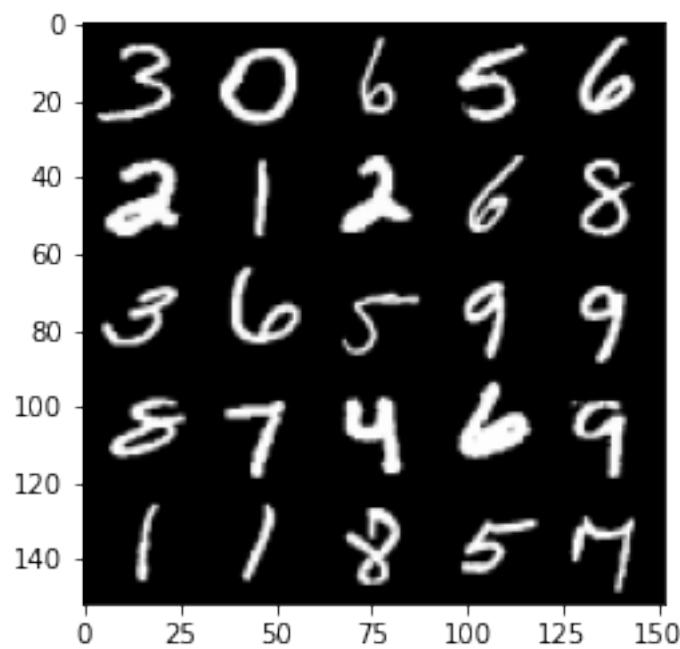
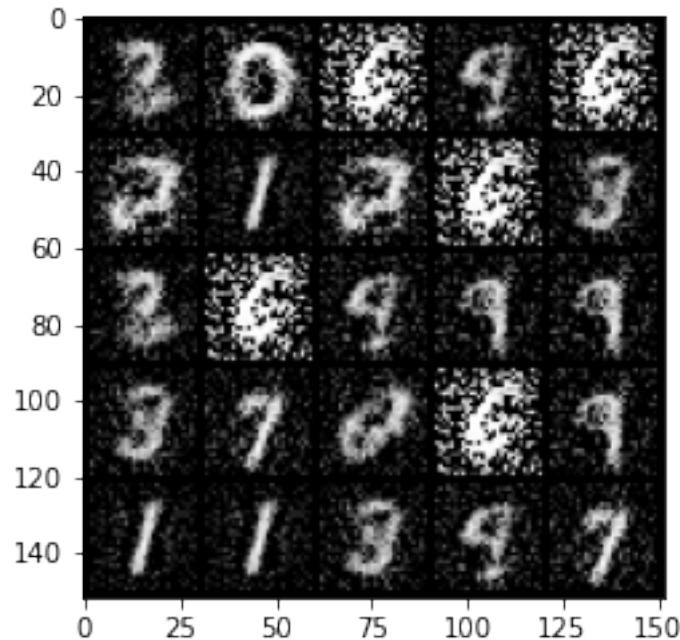
loss: 0.6677371543645855



100% | 469/469 [00:13<00:00, 34.55it/s]  
26% | 123/469 [00:03<00:10, 31.51it/s] Clipping input data to the

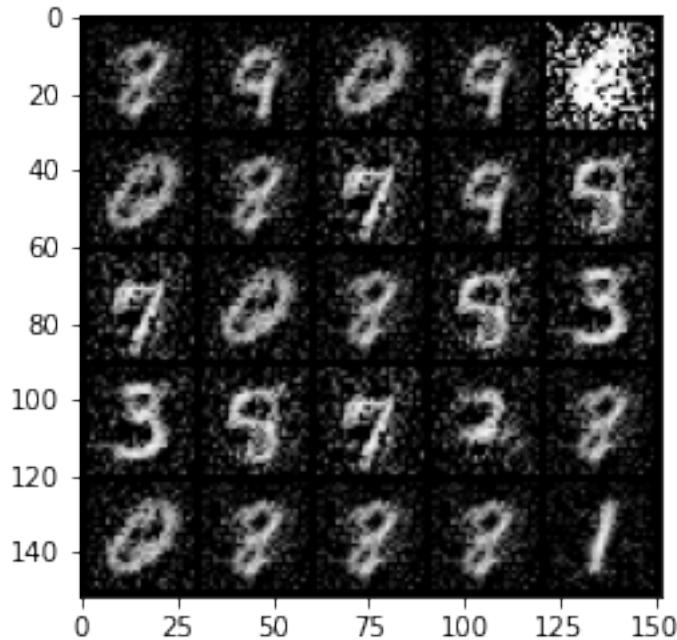
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

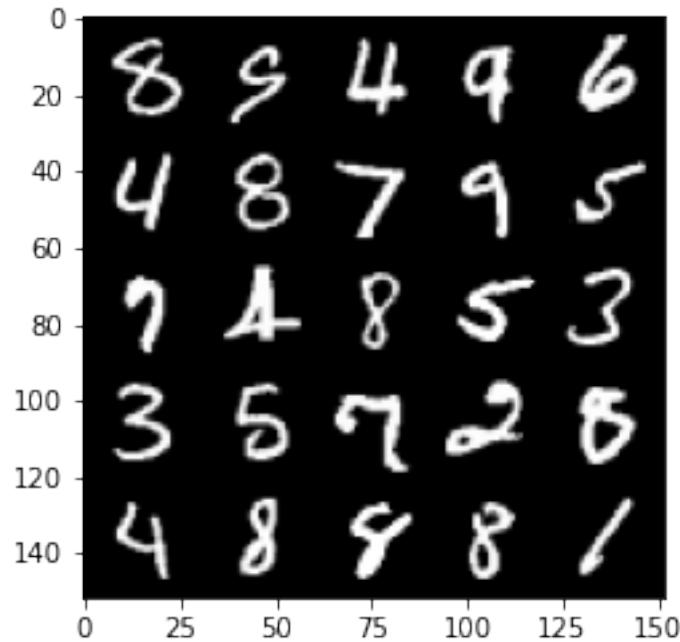
Epoch 246, step 115500 -> generator loss: 0.4647835299372672, discriminator loss: 0.6733755185604094



```
100%|      | 469/469 [00:13<00:00, 34.50it/s]
33%|      | 155/469 [00:04<00:08, 36.51it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

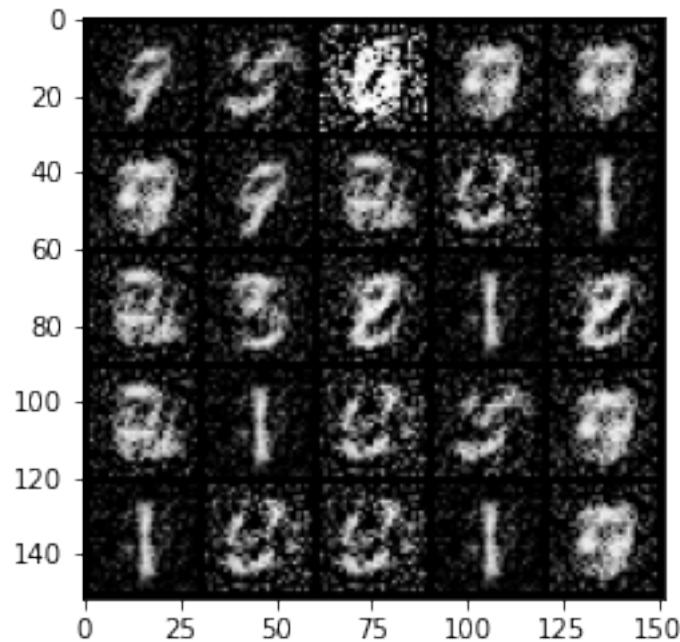
```
Epoch 247, step 116000 -> generator loss: 0.45667371499538423, discriminator
loss: 0.6903812880516053
```

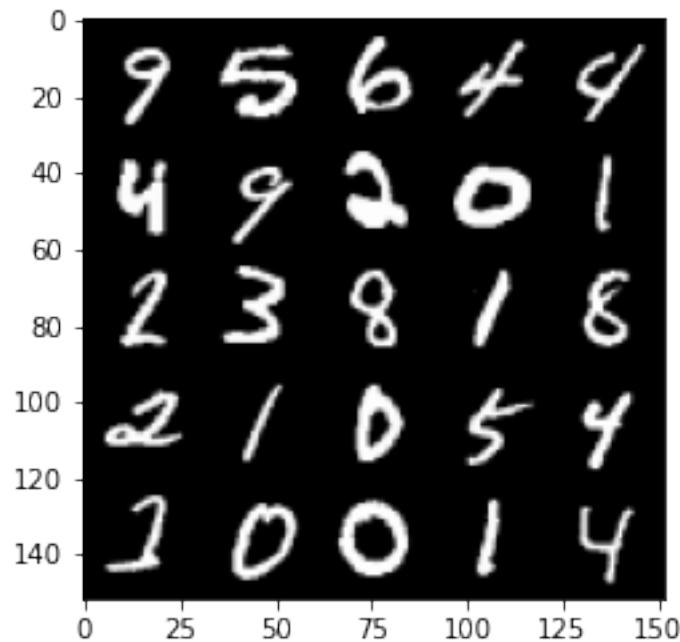




```
100% | 469/469 [00:13<00:00, 34.46it/s]
40% | 187/469 [00:05<00:07, 35.81it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

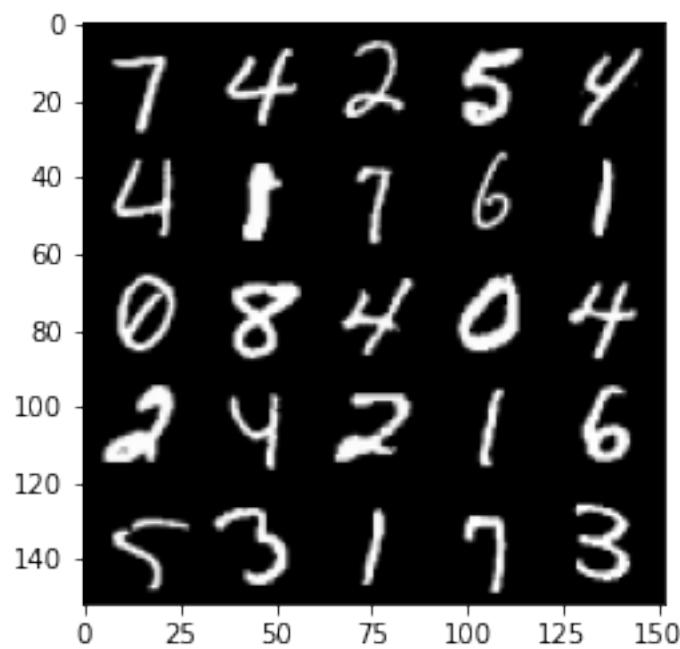
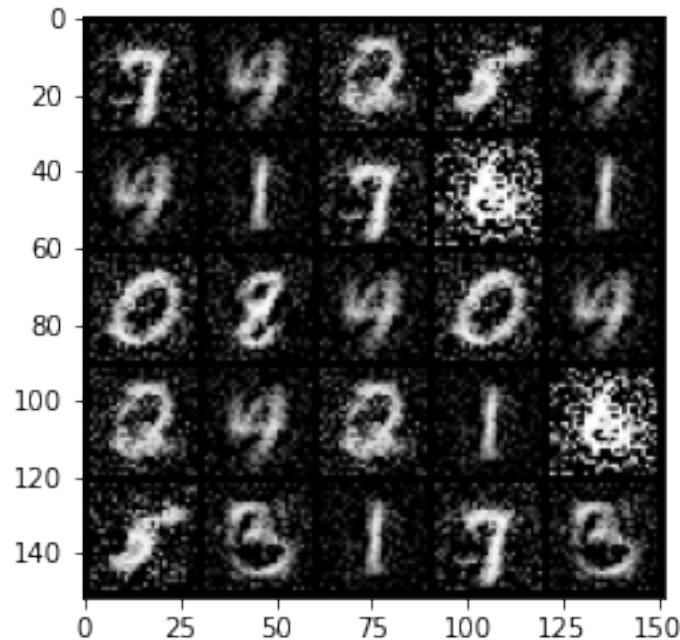
Epoch 248, step 116500 -> generator loss: 0.4500479259490966, discriminator loss: 0.7000750862359998





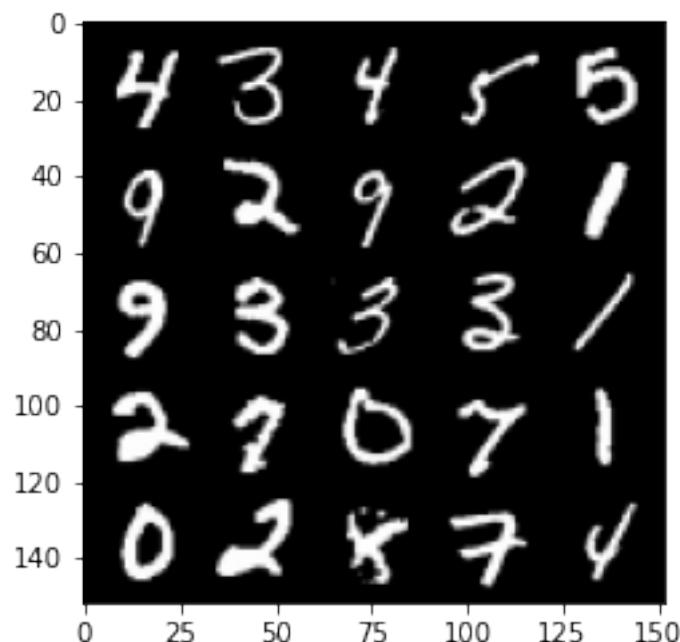
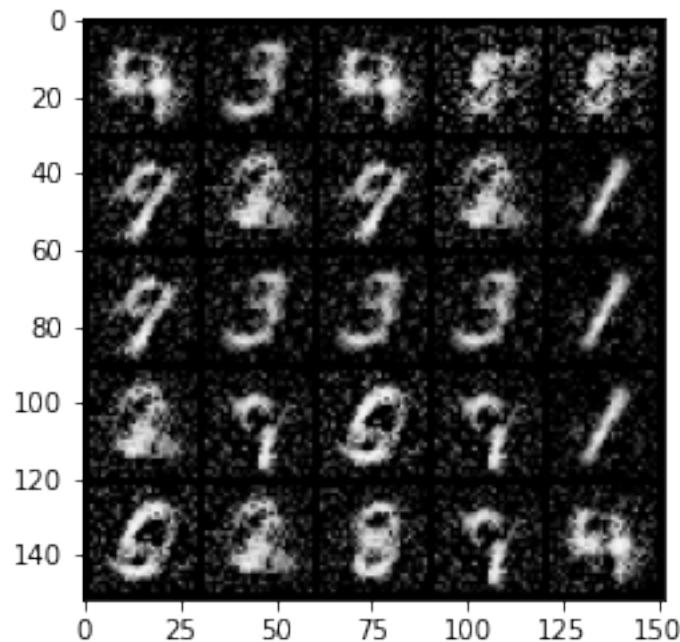
```
100% | 469/469 [00:13<00:00, 34.32it/s]
47% | 219/469 [00:06<00:06, 36.27it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 249, step 117000 -> generator loss: 0.45778756839036966, discriminator
loss: 0.6903130292892455
```



100% | 469/469 [00:13<00:00, 34.08it/s]  
53% | 248/469 [00:06<00:06, 34.86it/s] Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).

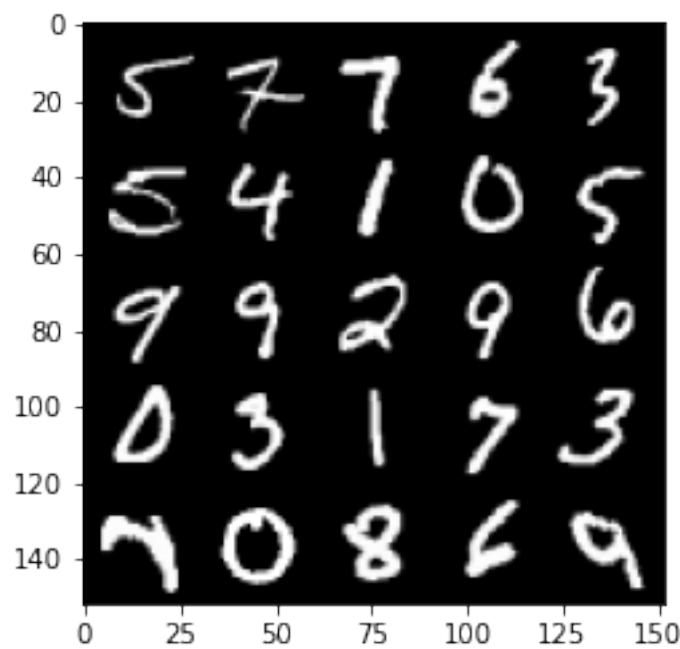
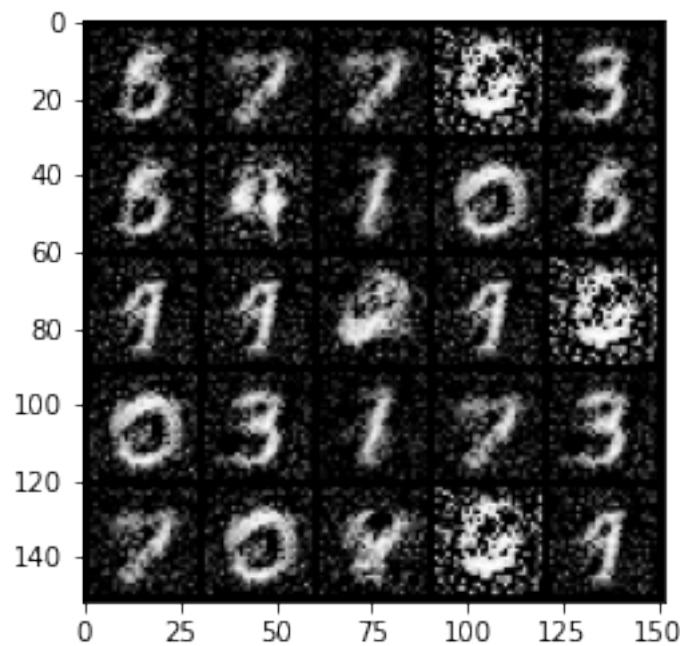
Epoch 250, step 117500 -> generator loss: 0.45624243551492705, discriminator loss: 0.6882079334259033



100% | 469/469 [00:13<00:00, 34.54it/s]

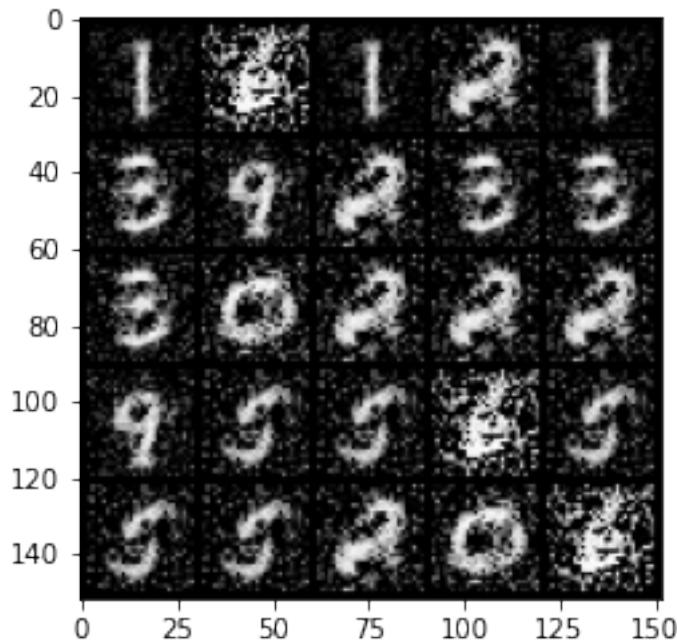
59%| 279/469 [00:07<00:05, 36.00it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

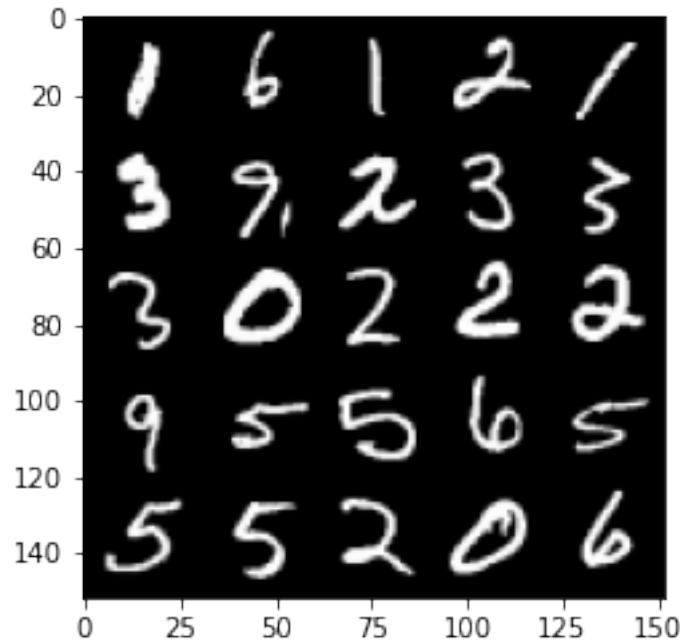
Epoch 251, step 118000 -> generator loss: 0.4595617312788961, discriminator loss: 0.6888198153972626



```
100%|      | 469/469 [00:13<00:00, 34.77it/s]
67%|      | 312/469 [00:08<00:04, 36.41it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

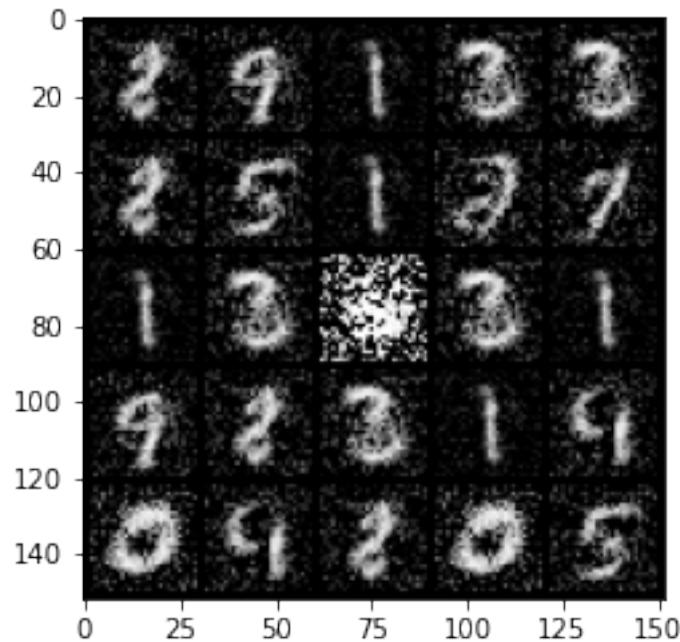
```
Epoch 252, step 118500 -> generator loss: 0.45318175810575495, discriminator
loss: 0.7024112423658375
```

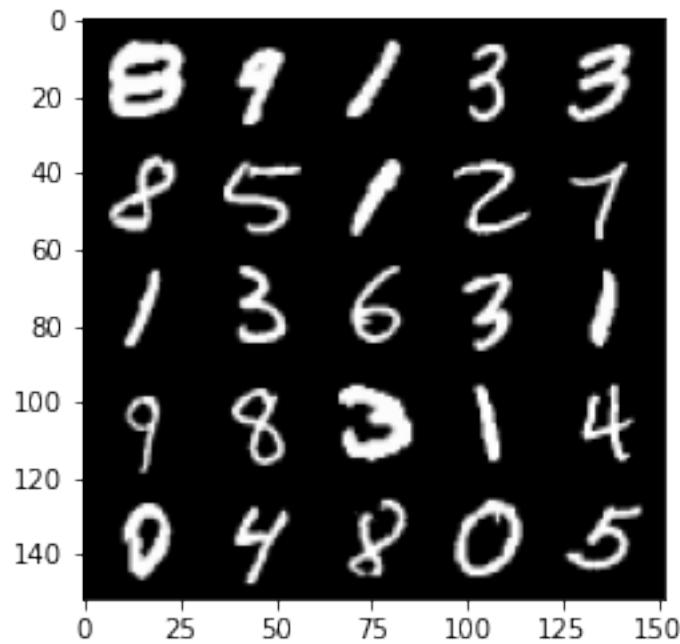




```
100%|      | 469/469 [00:13<00:00, 34.58it/s]
73%|      | 343/469 [00:09<00:03, 36.60it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

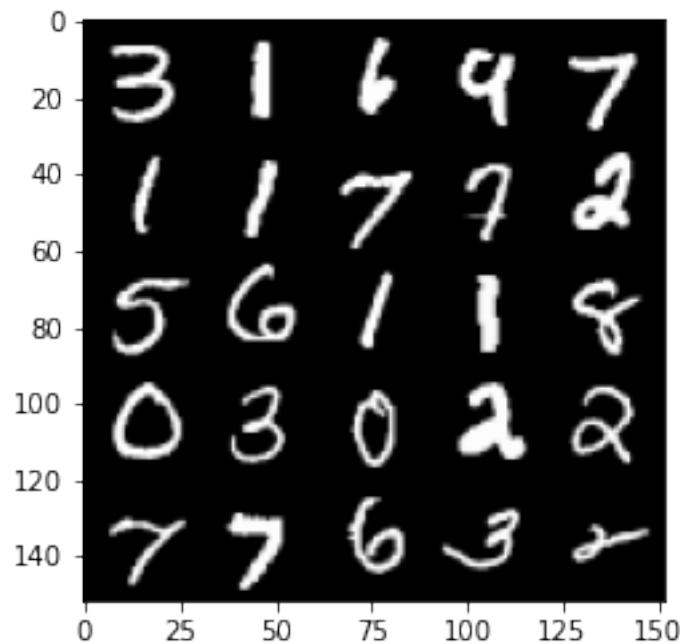
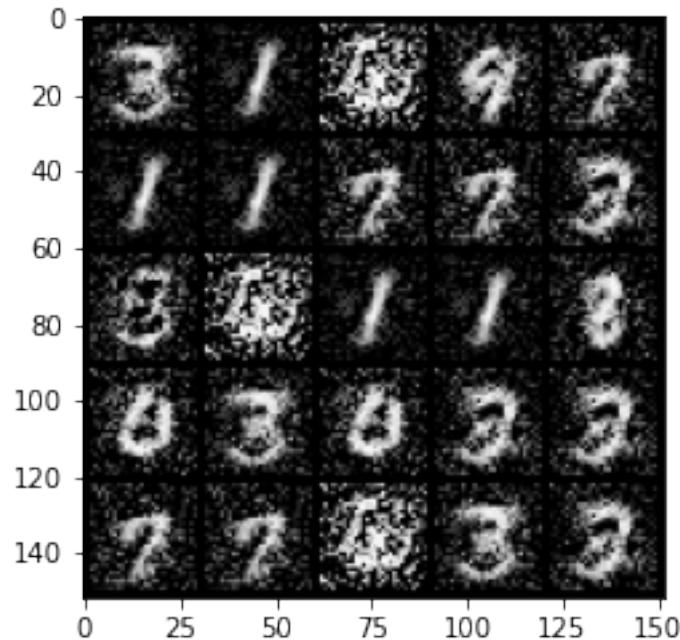
```
Epoch 253, step 119000 -> generator loss: 0.45470443010330147, discriminator
loss: 0.7003817692995069
```





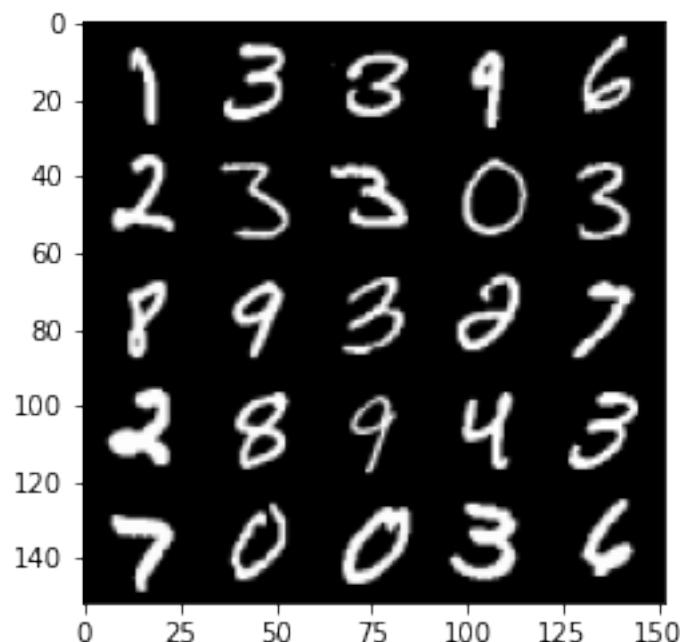
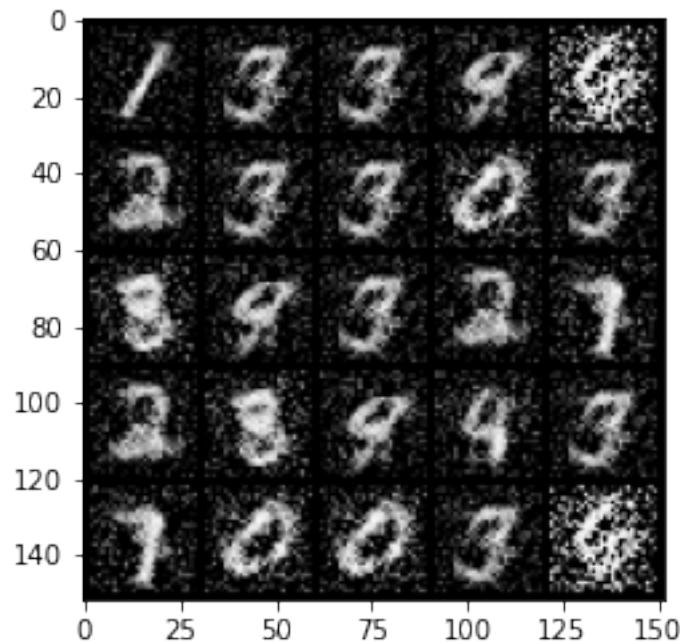
```
100% | 469/469 [00:13<00:00, 34.41it/s]
79% | 371/469 [00:10<00:02, 36.22it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 254, step 119500 -> generator loss: 0.4646569581627845, discriminator
loss: 0.6724083334207535
```



```
100%|      | 469/469 [00:13<00:00, 34.65it/s]
86%|      | 404/469 [00:11<00:01, 34.77it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

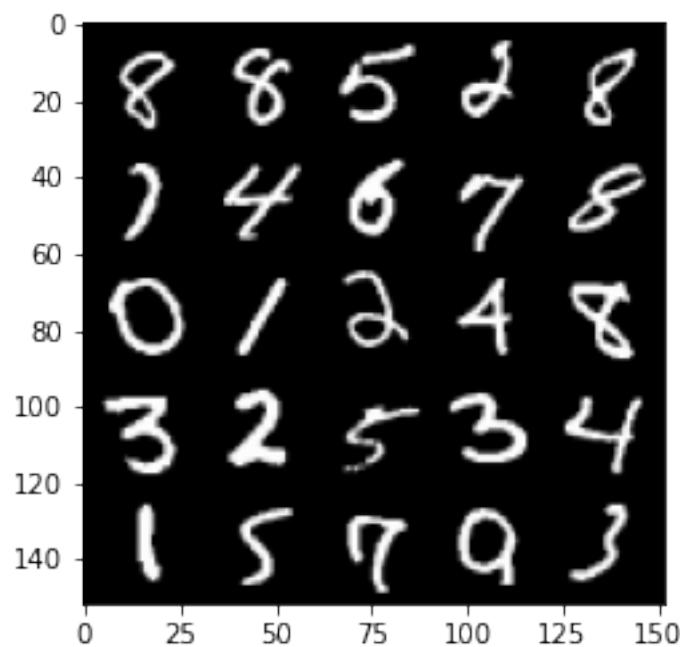
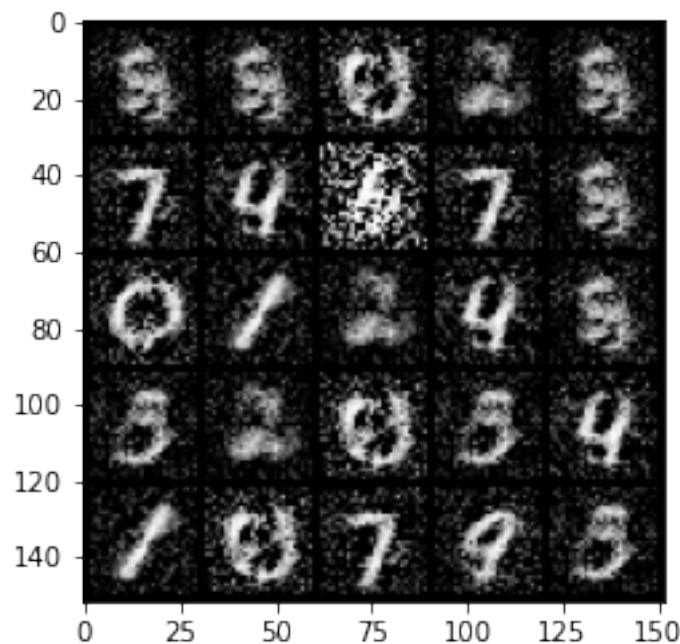
Epoch 255, step 120000 -> generator loss: 0.4629662240147586, discriminator loss: 0.6822399543523793



100% | 469/469 [00:13<00:00, 34.51it/s]

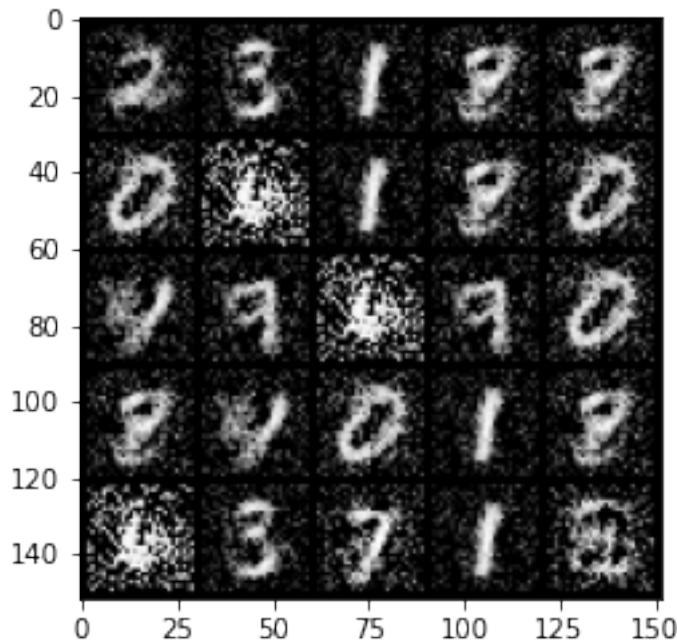
93%| 435/469 [00:12<00:01, 33.51it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

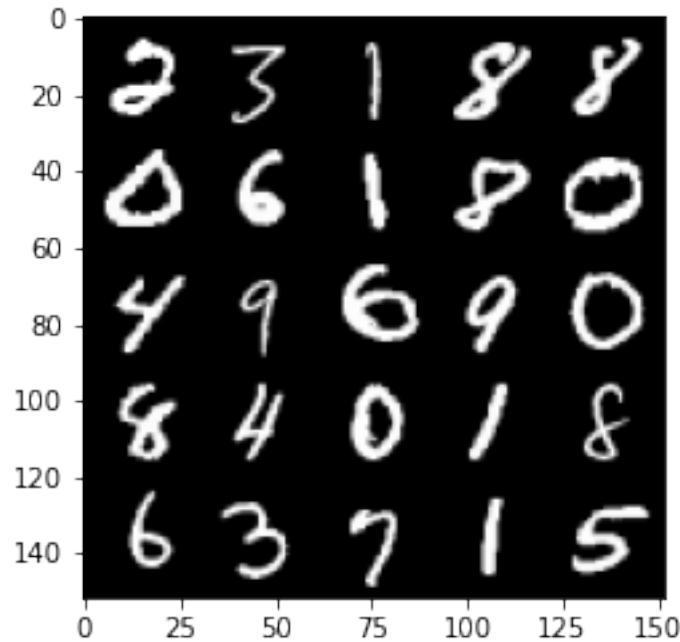
Epoch 256, step 120500 -> generator loss: 0.459520156145096, discriminator loss: 0.692038456916809



```
100%| 469/469 [00:13<00:00, 34.53it/s]
99%| 466/469 [00:13<00:00, 36.11it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

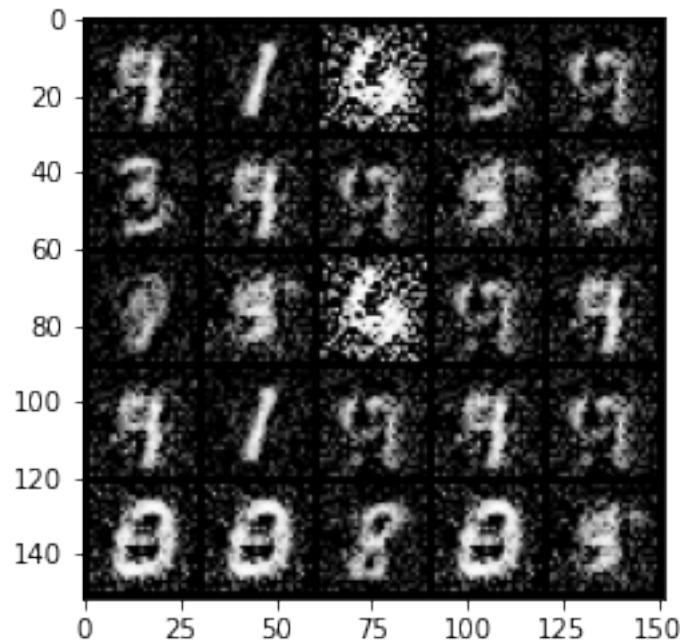
```
Epoch 257, step 121000 -> generator loss: 0.45802617400884676, discriminator
loss: 0.686247439622879
```

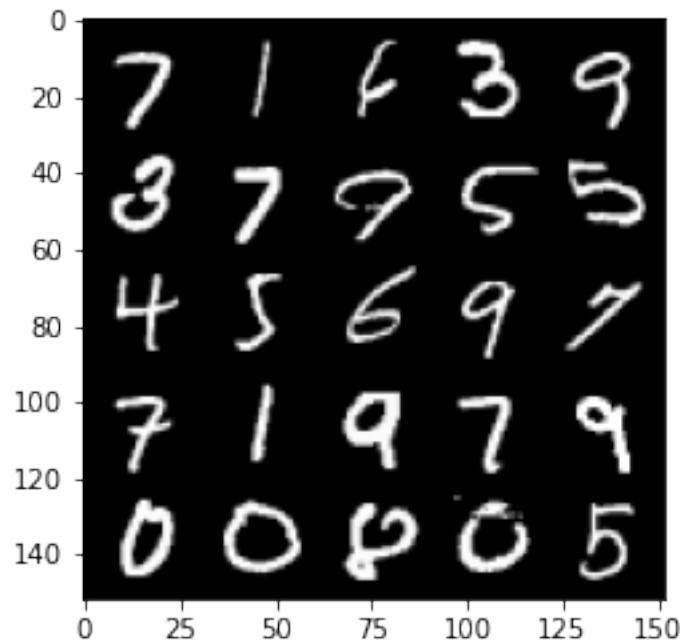




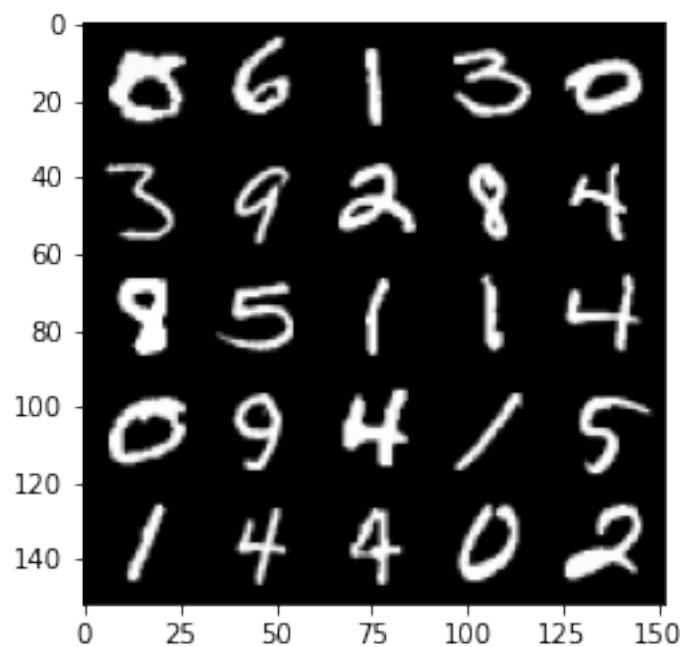
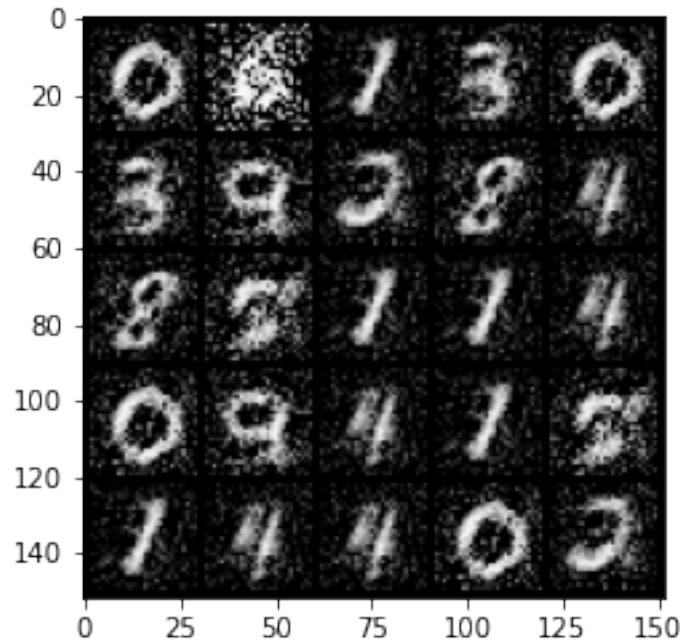
```
100%|   | 469/469 [00:13<00:00, 34.73it/s]
100%|   | 469/469 [00:13<00:00, 35.51it/s]
  6%|   | 28/469 [00:00<00:12, 34.95it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 259, step 121500 -> generator loss: 0.44964682102203385, discriminator
loss: 0.6951883242130289
```





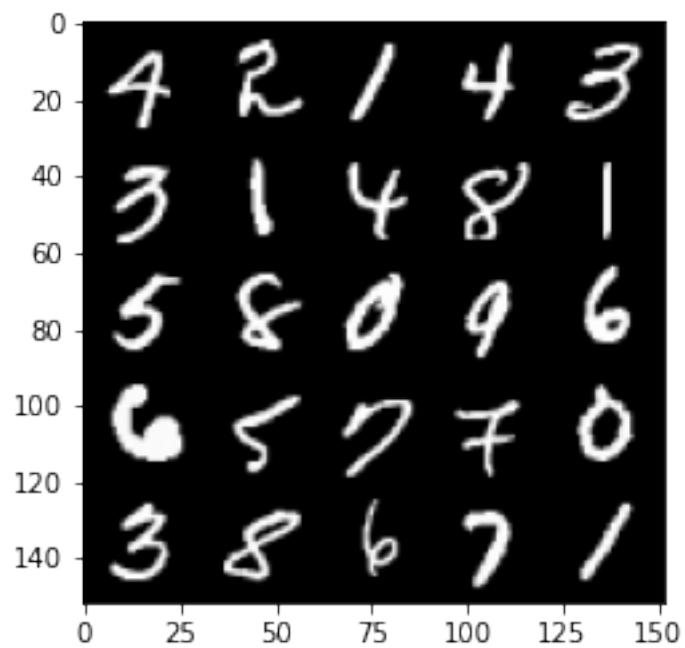
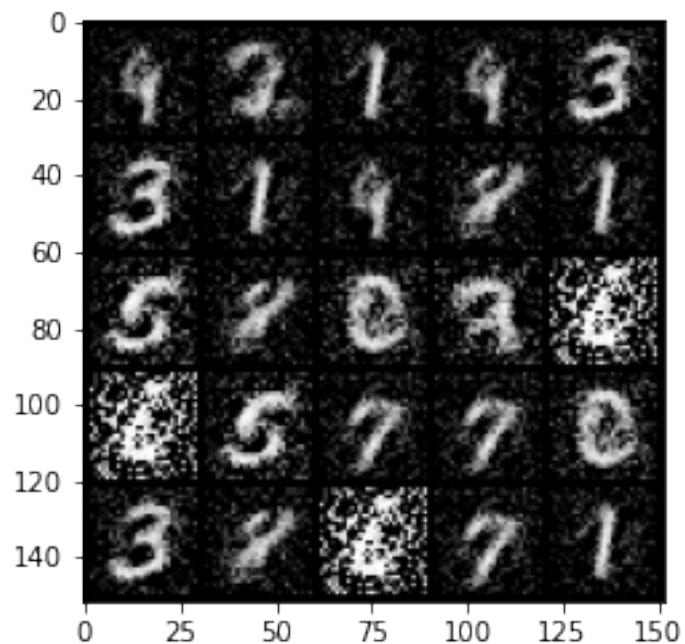
```
100% | 469/469 [00:13<00:00, 33.89it/s]
13% | 60/469 [00:01<00:11, 35.05it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 260, step 122000 -> generator loss: 0.46716244810819607, discriminator
loss: 0.6653608518838885
```



100% | 469/469 [00:13<00:00, 34.28it/s]  
19% | 88/469 [00:02<00:10, 35.98it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 261, step 122500 -> generator loss: 0.4719164627790447, discriminator

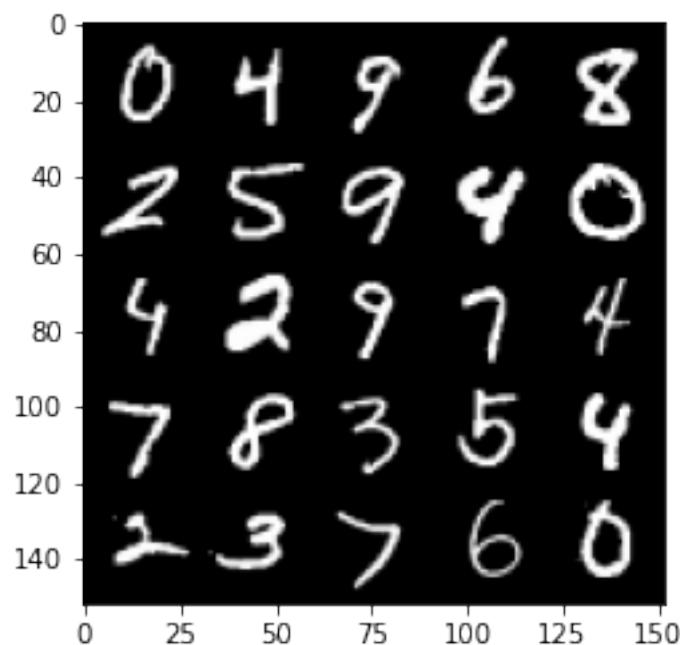
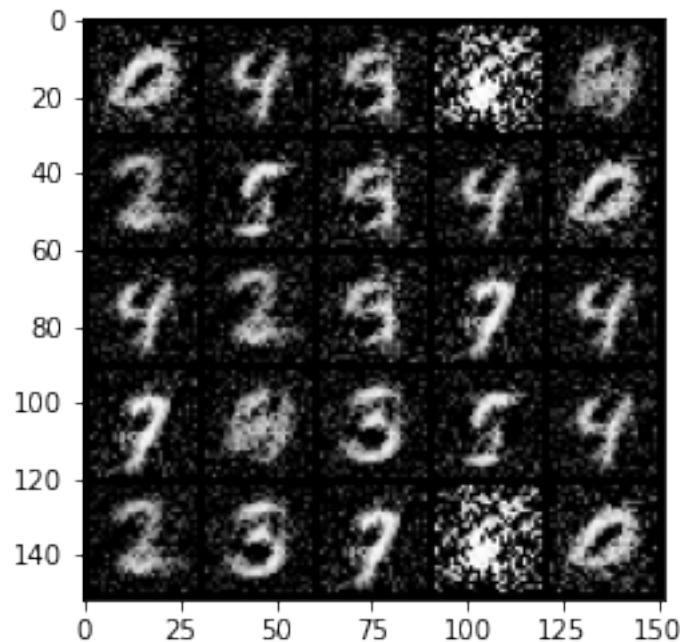
loss: 0.6662285122871401



100% | 469/469 [00:13<00:00, 34.47it/s]  
26% | 122/469 [00:04<00:16, 21.13it/s] Clipping input data to the

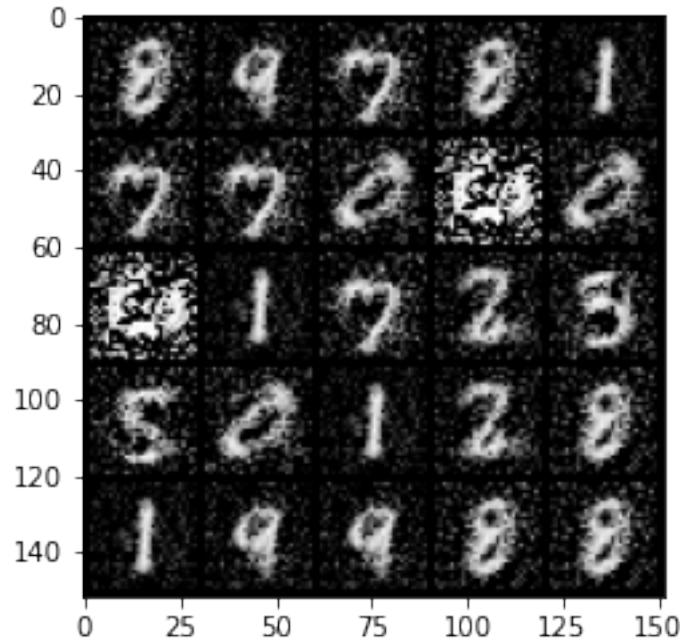
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

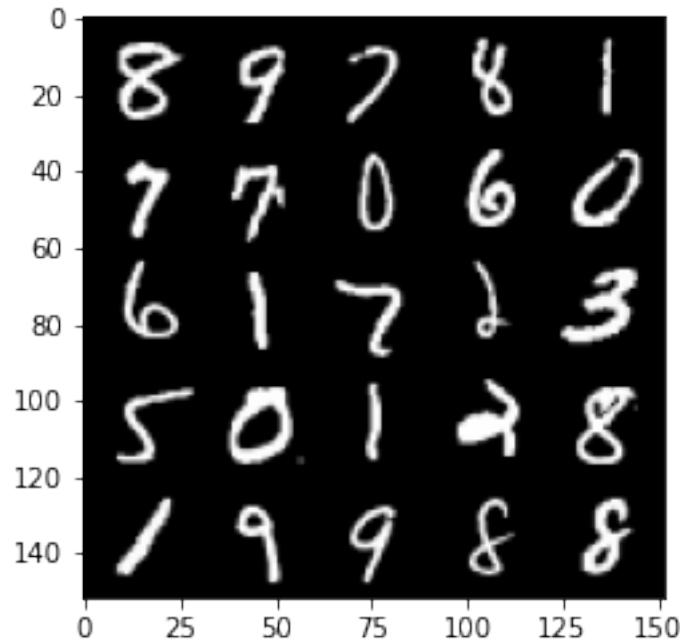
Epoch 262, step 123000 -> generator loss: 0.46654480987787245, discriminator loss: 0.675392528891563



```
100%|      | 469/469 [00:15<00:00, 29.80it/s]
32%|      | 150/469 [00:04<00:09, 34.32it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

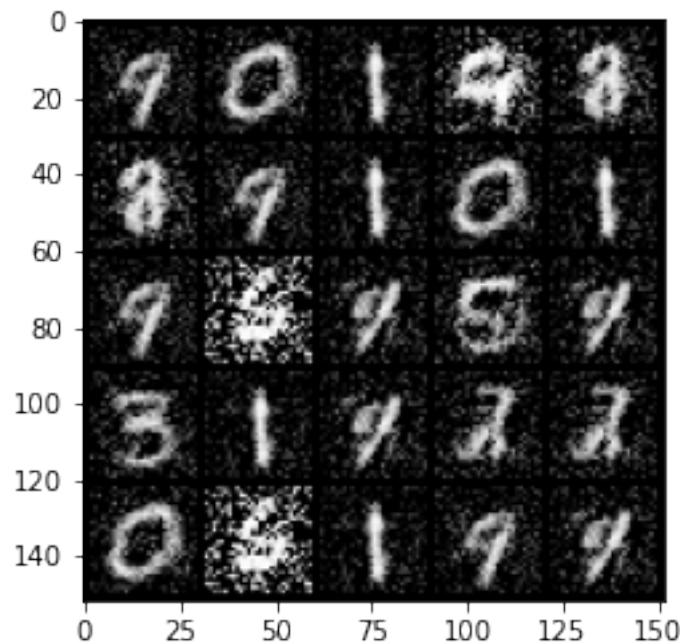
```
Epoch 263, step 123500 -> generator loss: 0.45731474590301485, discriminator
loss: 0.691326104521751
```

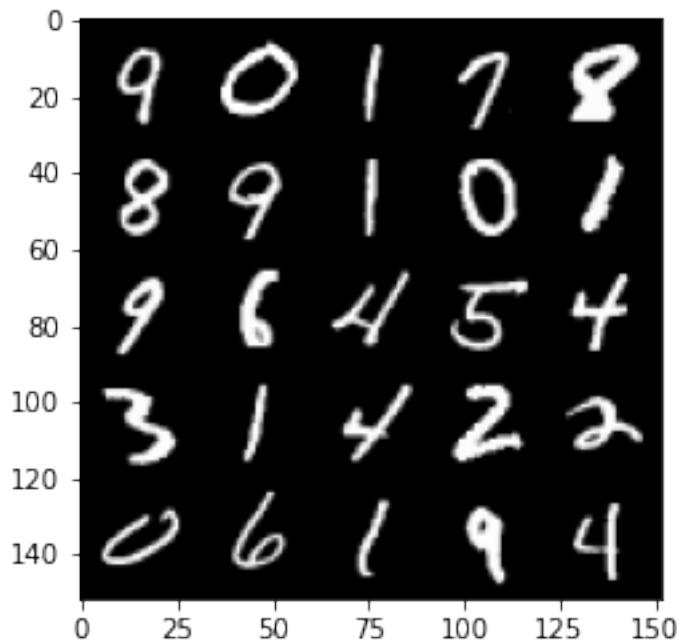




```
100%|      | 469/469 [00:14<00:00, 32.41it/s]
39%|      | 183/469 [00:05<00:08, 33.13it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

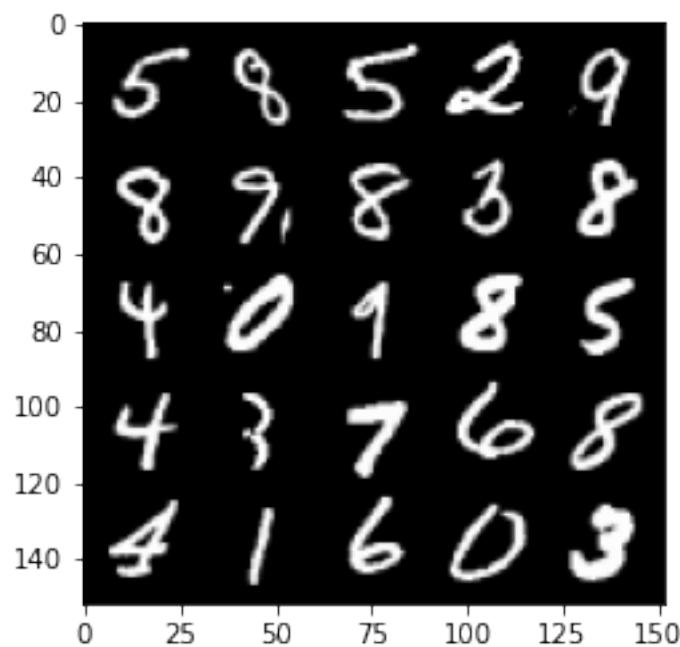
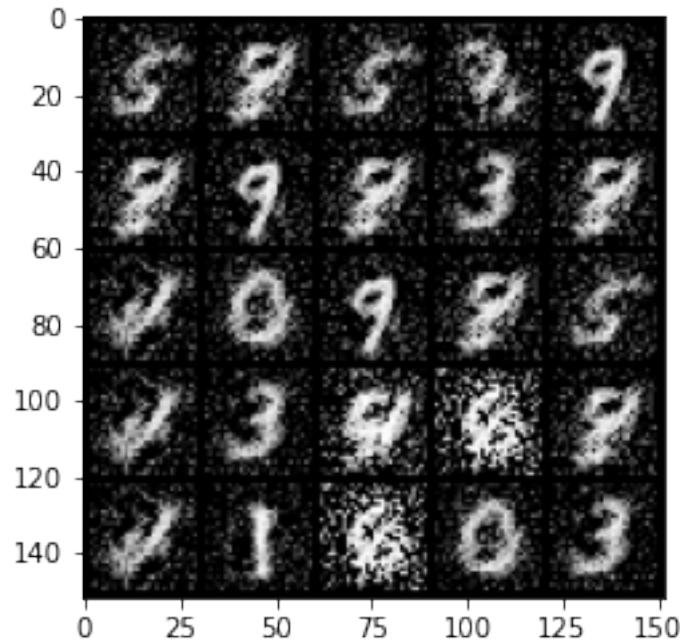
```
Epoch 264, step 124000 -> generator loss: 0.467563518345356, discriminator loss:
0.670818884253502
```





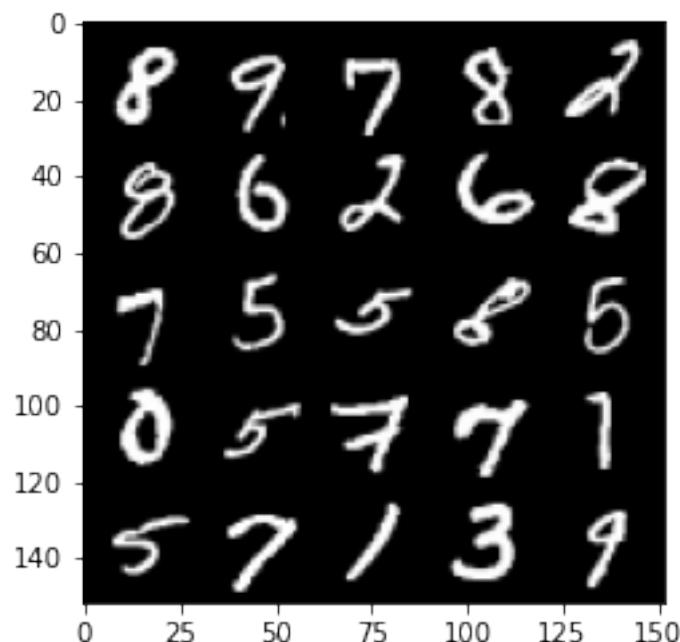
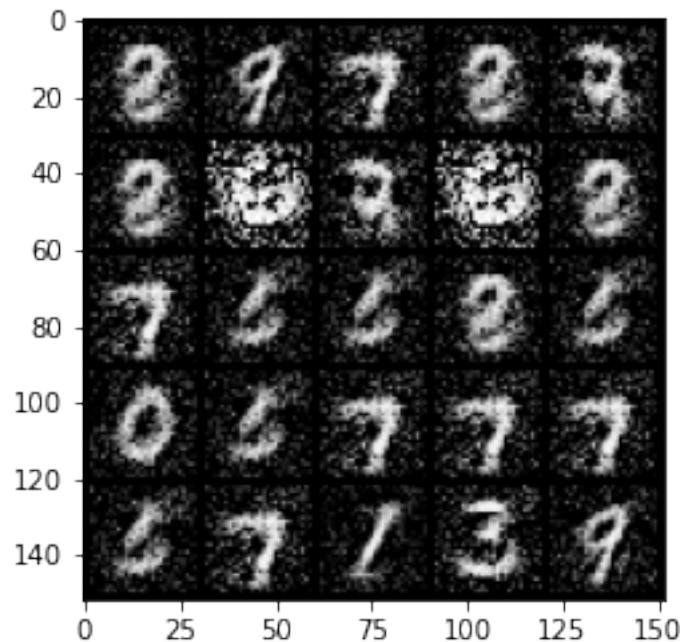
```
100% | 469/469 [00:14<00:00, 32.82it/s]
46% | 215/469 [00:06<00:07, 34.24it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 265, step 124500 -> generator loss: 0.46474750244617485, discriminator
loss: 0.679281097412109
```



```
100%|      | 469/469 [00:14<00:00, 32.68it/s]
52%|      | 243/469 [00:07<00:06, 34.50it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

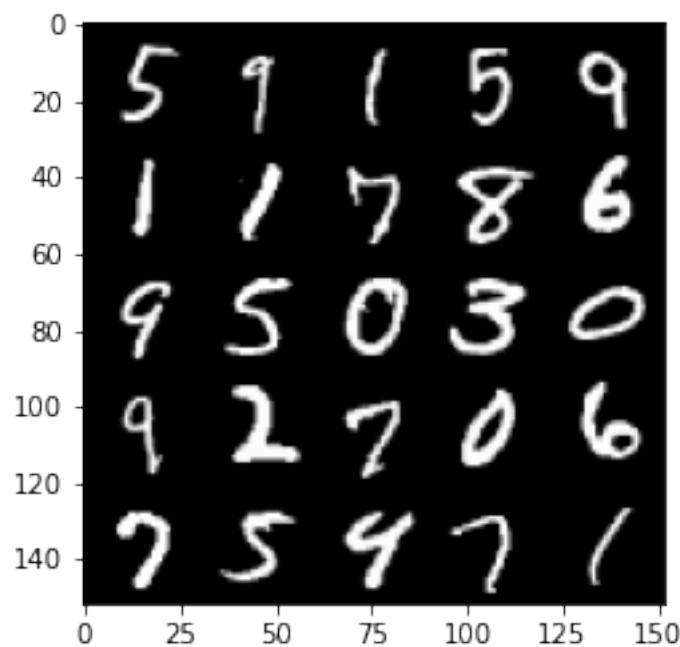
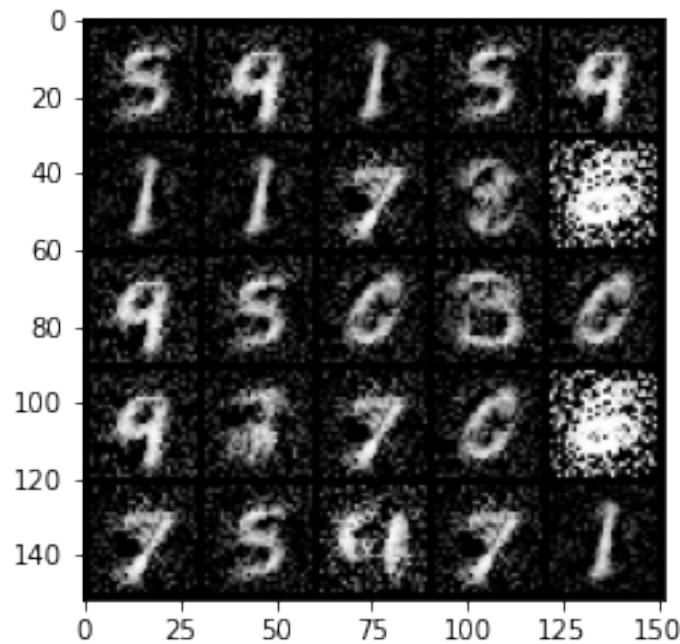
Epoch 266, step 125000 -> generator loss: 0.47052239048480976, discriminator loss: 0.6721912710666654



100% | 469/469 [00:14<00:00, 32.96it/s]

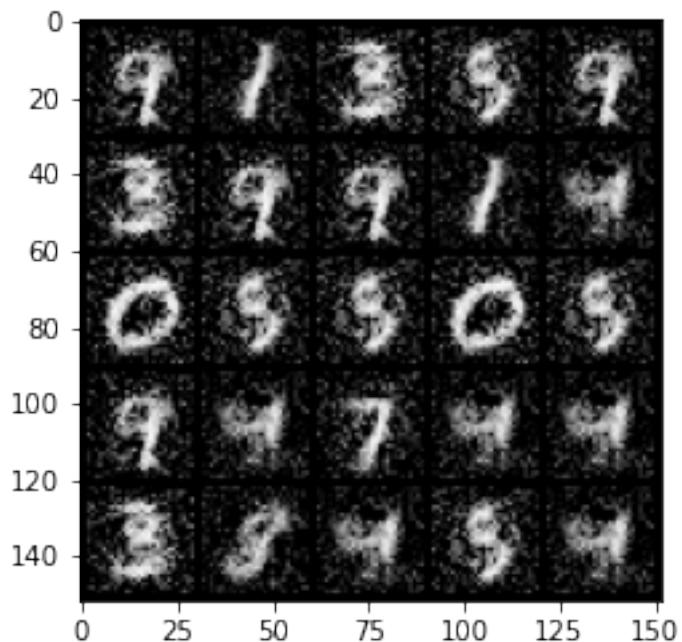
58%| 274/469 [00:08<00:05, 34.42it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

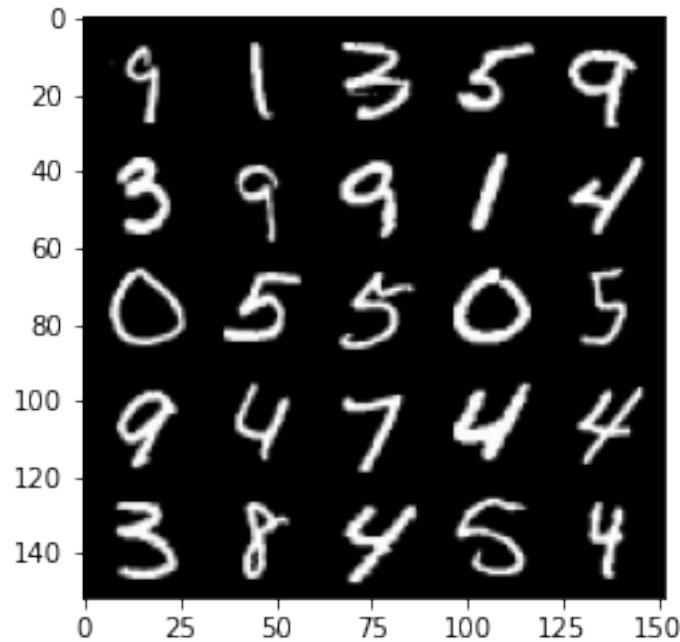
Epoch 267, step 125500 -> generator loss: 0.46007954949140567, discriminator loss: 0.6799266197681432



```
100%|      | 469/469 [00:14<00:00, 32.78it/s]
66%|      | 308/469 [00:09<00:04, 33.35it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

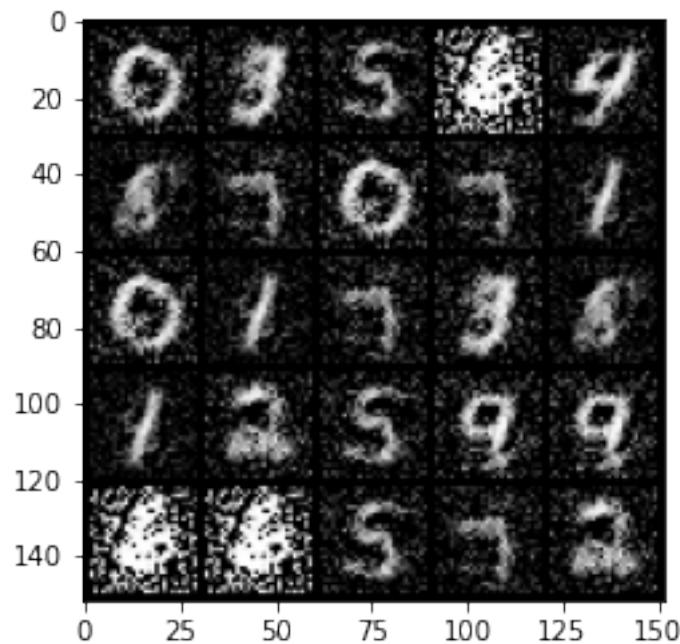
```
Epoch 268, step 126000 -> generator loss: 0.45559127318859105, discriminator
loss: 0.6836249909400937
```

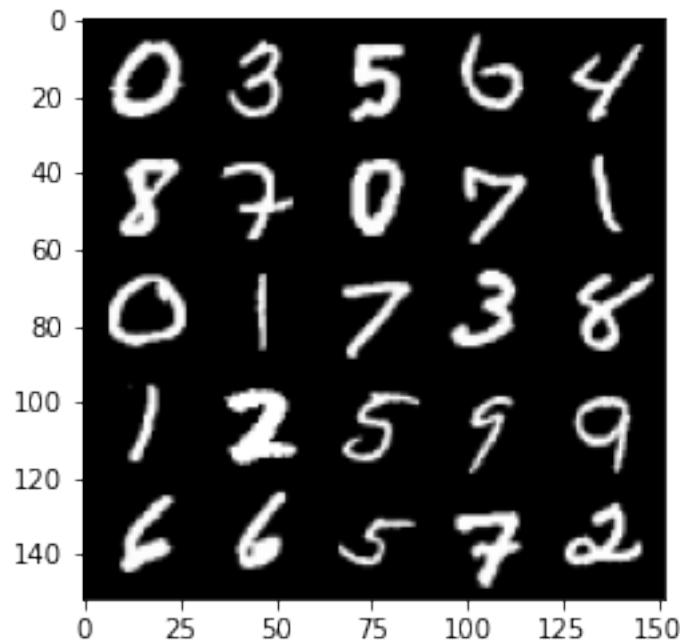




```
100%|      | 469/469 [00:14<00:00, 32.66it/s]
72%|      | 339/469 [00:10<00:03, 35.04it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

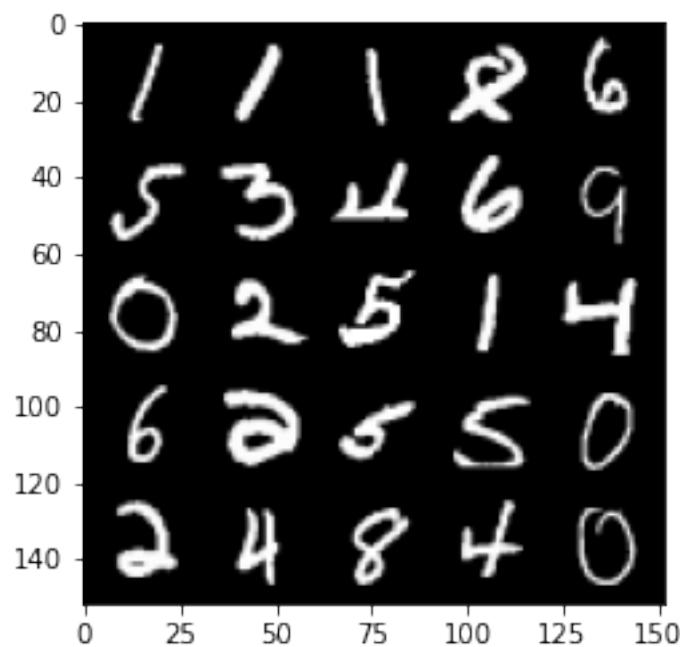
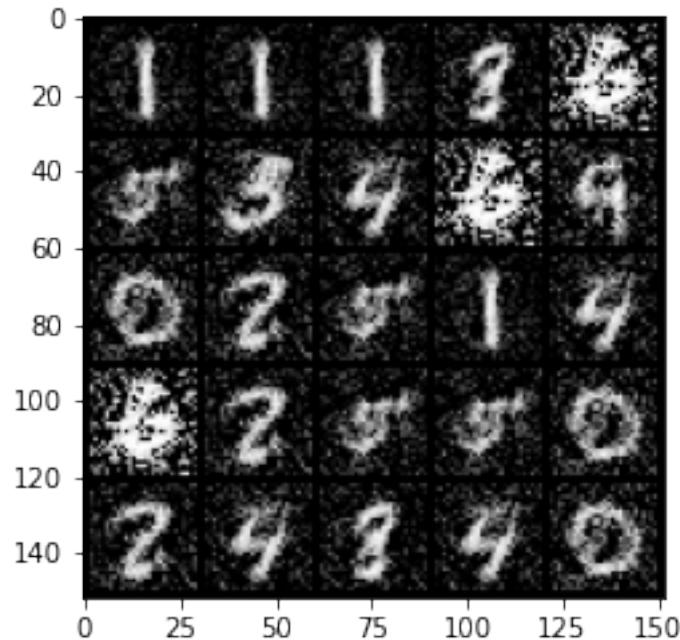
```
Epoch 269, step 126500 -> generator loss: 0.4576573030352593, discriminator
loss: 0.686388516306877
```





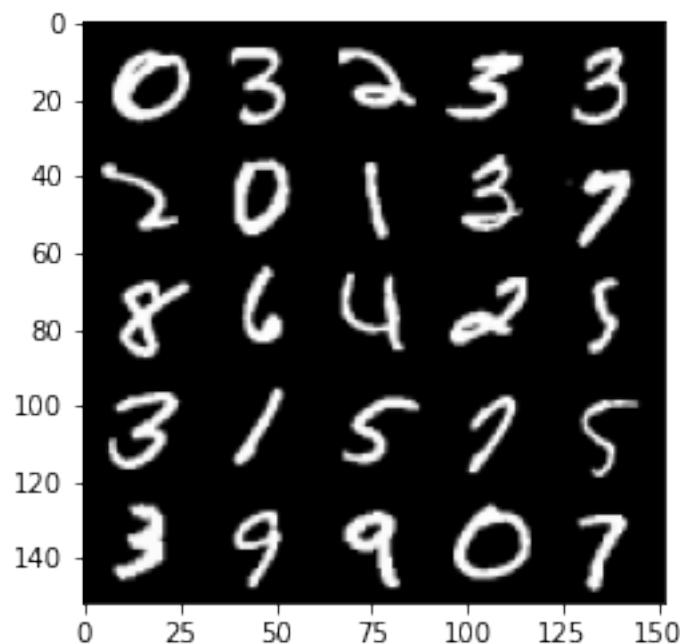
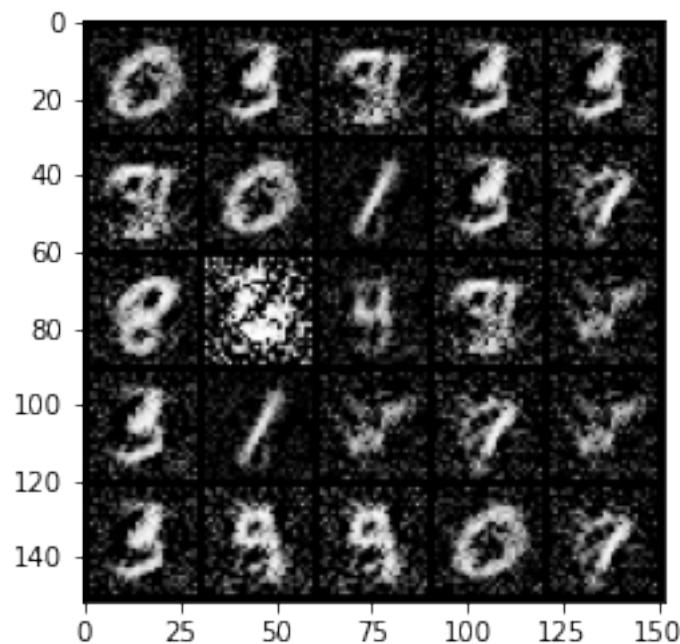
```
100%|      | 469/469 [00:14<00:00, 32.90it/s]
78%|      | 367/469 [00:10<00:03, 33.54it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 270, step 127000 -> generator loss: 0.4656277947425844, discriminator
loss: 0.6751955510377882
```



```
100%|     | 469/469 [00:14<00:00, 32.59it/s]
85%|     | 398/469 [00:11<00:02, 34.14it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

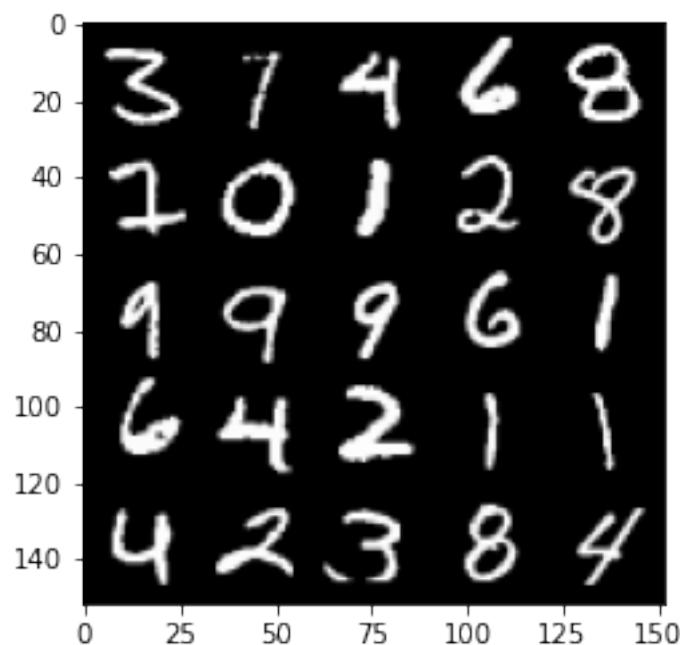
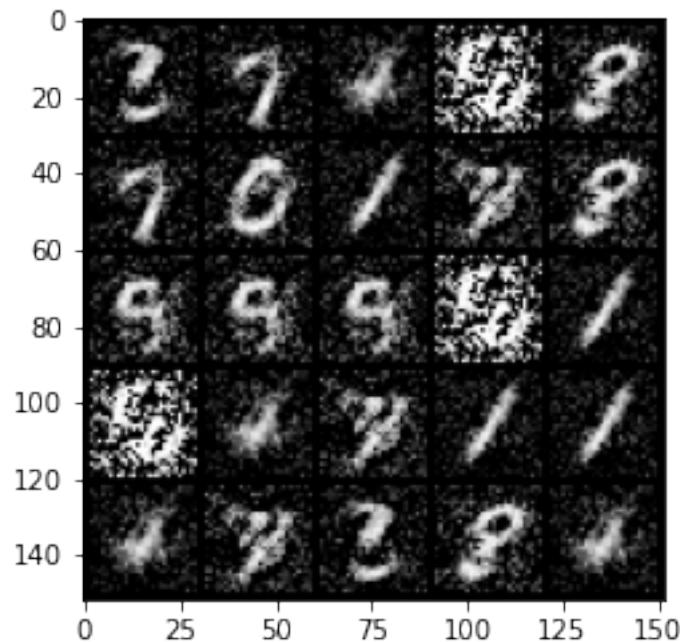
Epoch 271, step 127500 -> generator loss: 0.46884759593009906, discriminator loss: 0.667790526509285



100% | 469/469 [00:14<00:00, 32.36it/s]

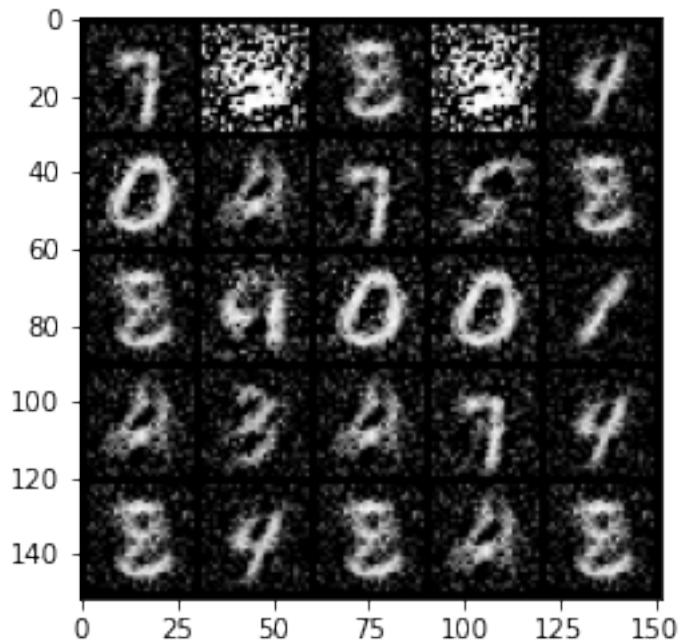
92%| 430/469 [00:12<00:01, 34.51it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

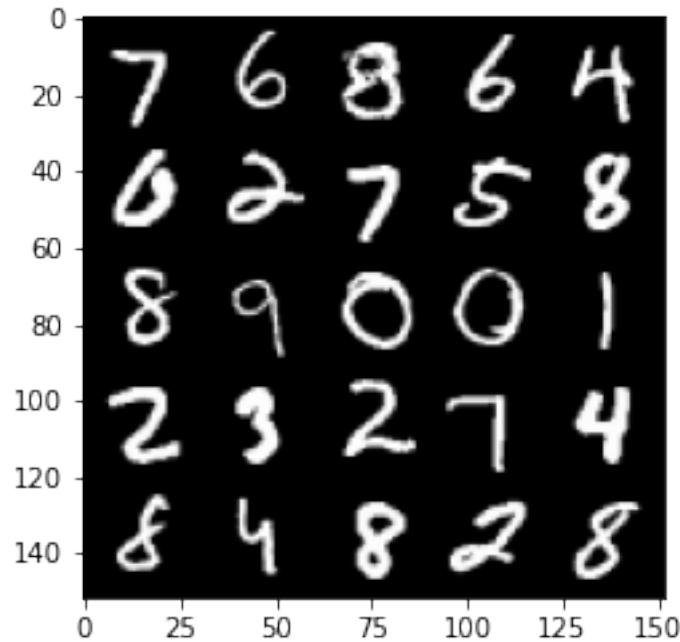
Epoch 272, step 128000 -> generator loss: 0.46574962729215585, discriminator loss: 0.668385431528091



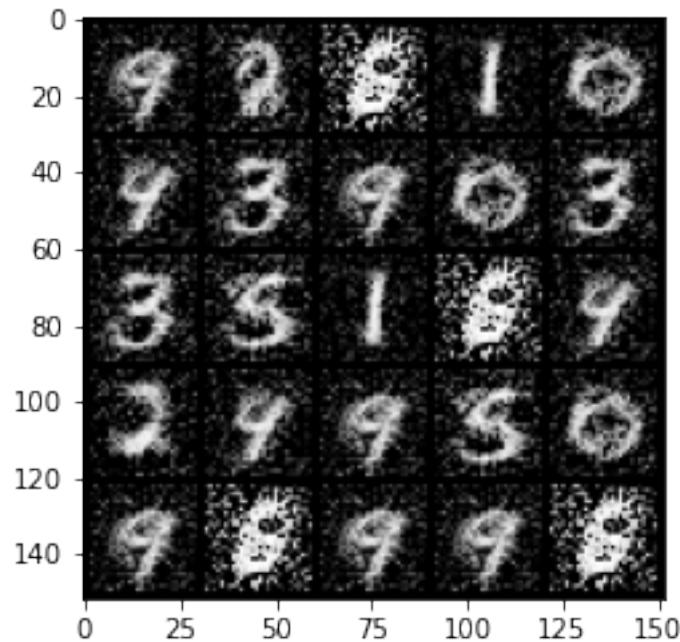
```
100%|    | 469/469 [00:14<00:00, 32.75it/s]
98%|    | 460/469 [00:13<00:00, 34.21it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

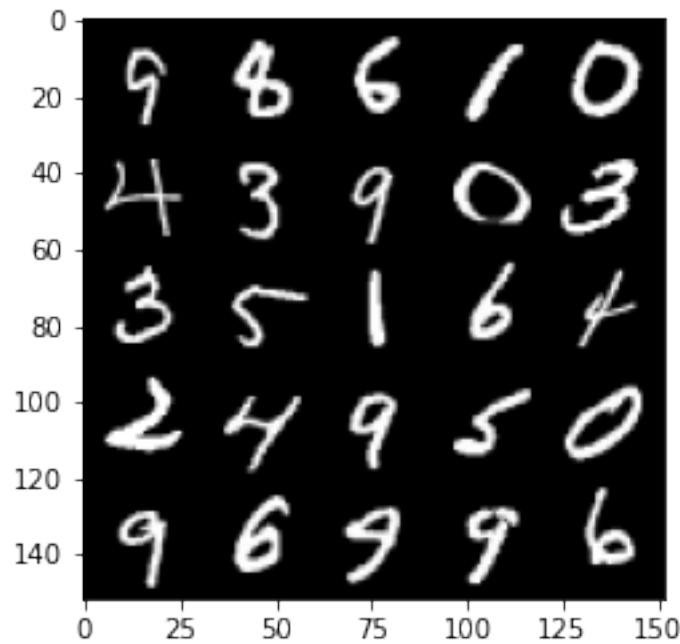
```
Epoch 273, step 128500 -> generator loss: 0.4676649766564371, discriminator
loss: 0.6674594144821162
```



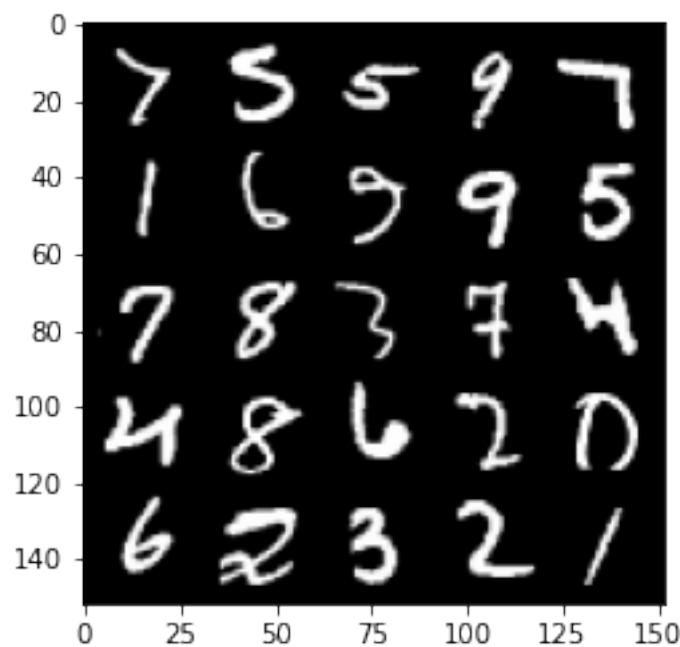
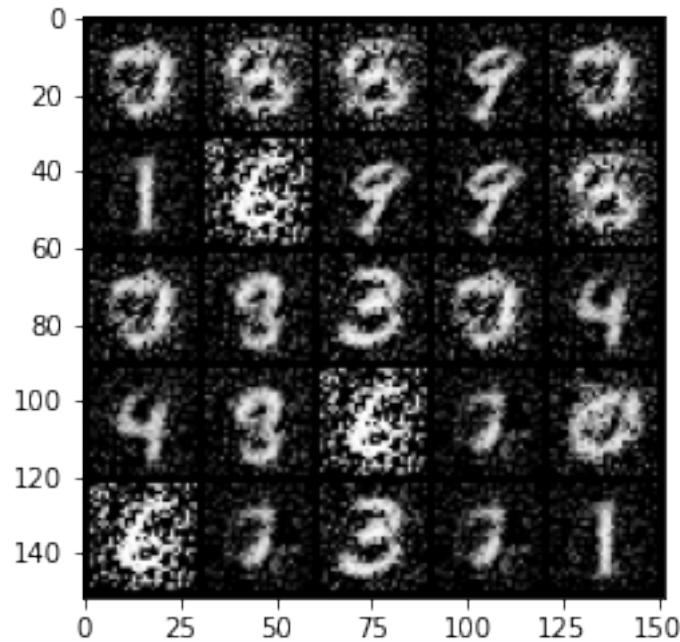


```
100%| 469/469 [00:14<00:00, 32.92it/s]
100%| 469/469 [00:13<00:00, 33.63it/s]
 5%| 24/469 [00:00<00:13, 34.17it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 275, step 129000 -> generator loss: 0.45658134442567794, discriminator
loss: 0.6920044965744018
```





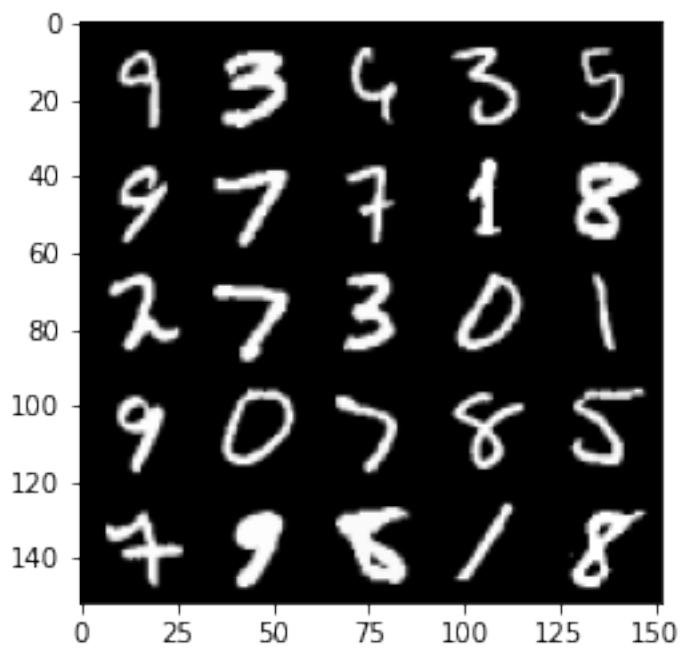
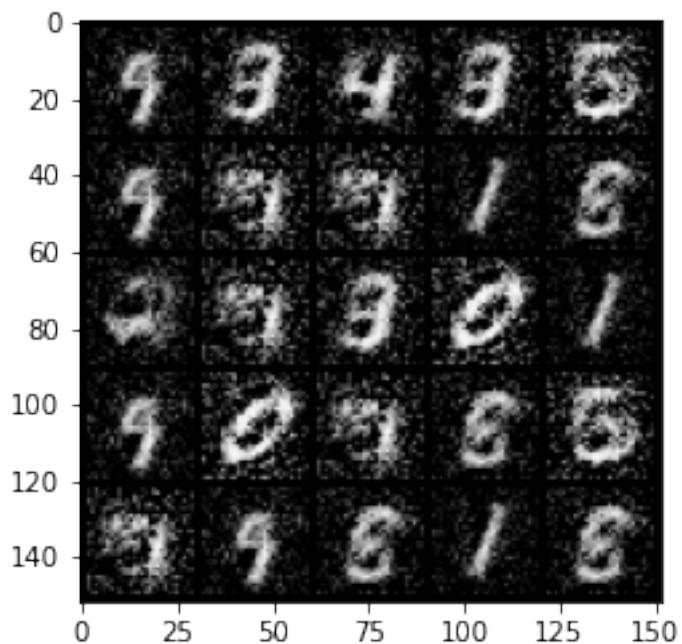
```
100% | 469/469 [00:14<00:00, 33.12it/s]
12% | 54/469 [00:01<00:12, 34.03it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 276, step 129500 -> generator loss: 0.46499574381113085, discriminator
loss: 0.6738454256057743
```



```
100% | 469/469 [00:14<00:00, 32.76it/s]
18% | 86/469 [00:02<00:12, 30.68it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 277, step 130000 -> generator loss: 0.45780638378858557, discriminator

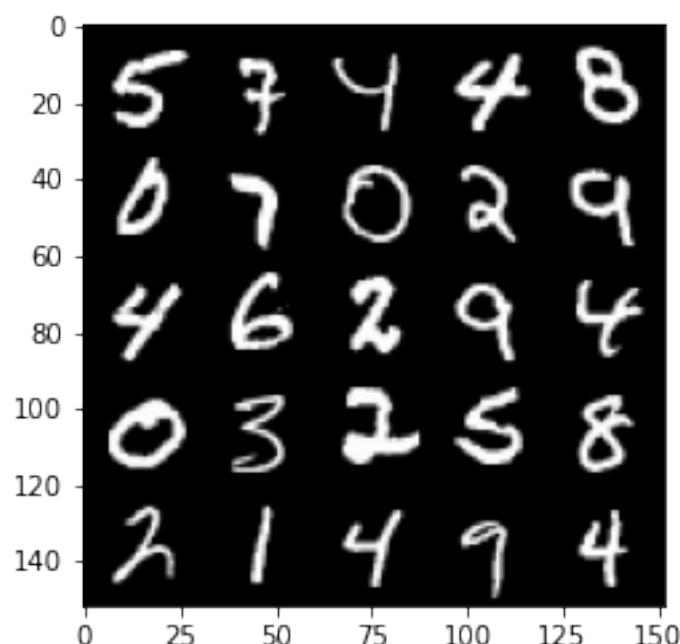
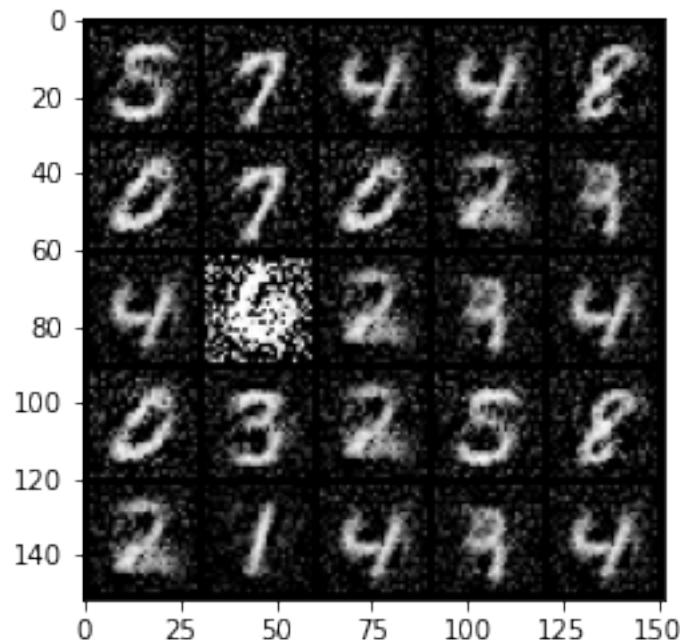
loss: 0.682380387544632



100% | 469/469 [00:14<00:00, 32.59it/s]  
25% | 118/469 [00:03<00:10, 34.73it/s] Clipping input data to the

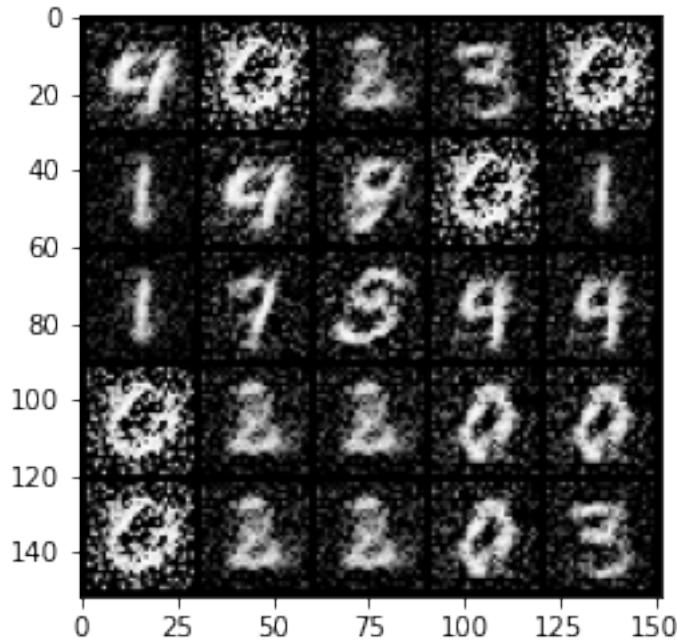
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

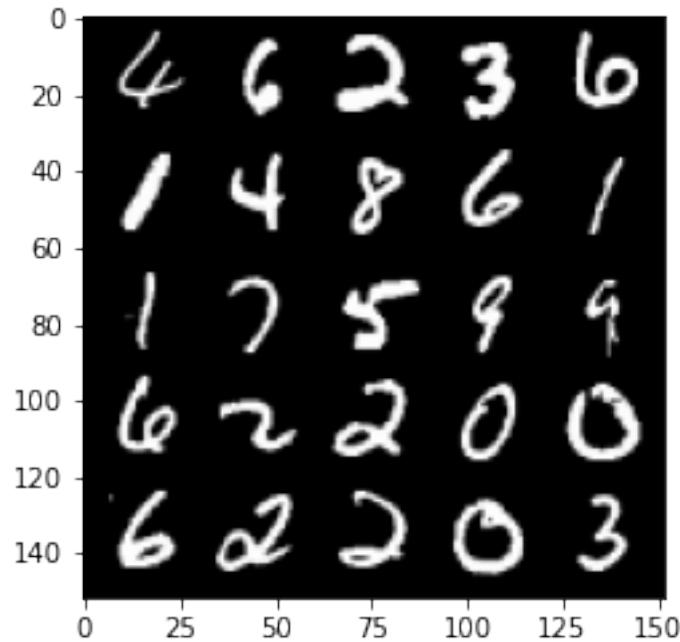
Epoch 278, step 130500 -> generator loss: 0.46618350696563743, discriminator loss: 0.6776016674041742



```
100%|      | 469/469 [00:14<00:00, 32.22it/s]
32%|      | 149/469 [00:05<00:11, 27.19it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

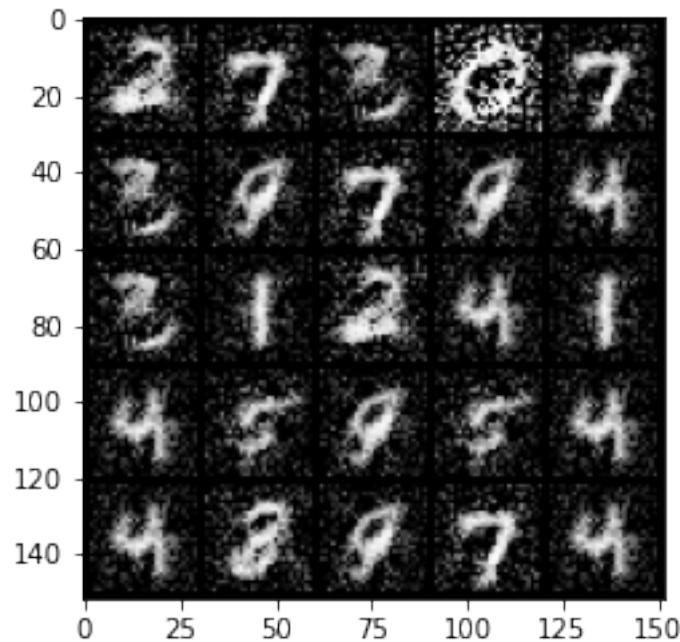
Epoch 279, step 131000 -> generator loss: 0.4615774199962616, discriminator  
loss: 0.6867572566270826

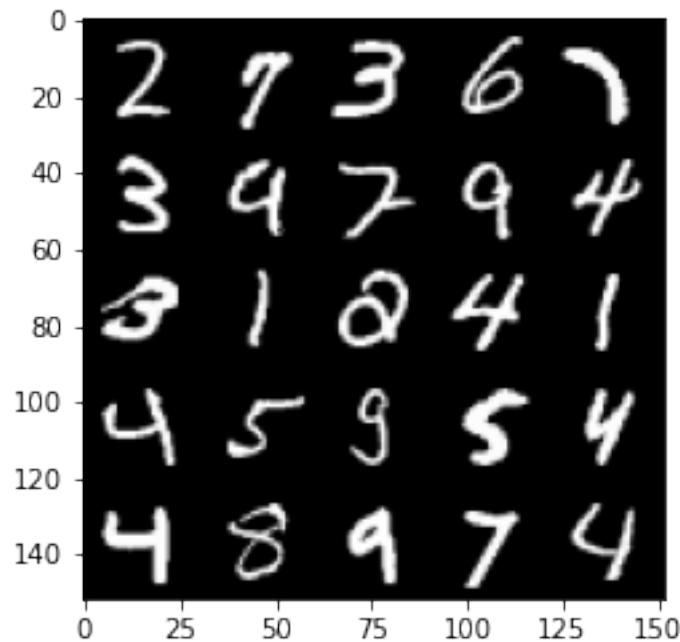




```
100%|      | 469/469 [00:16<00:00, 29.19it/s]
38%|      | 179/469 [00:05<00:11, 26.19it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

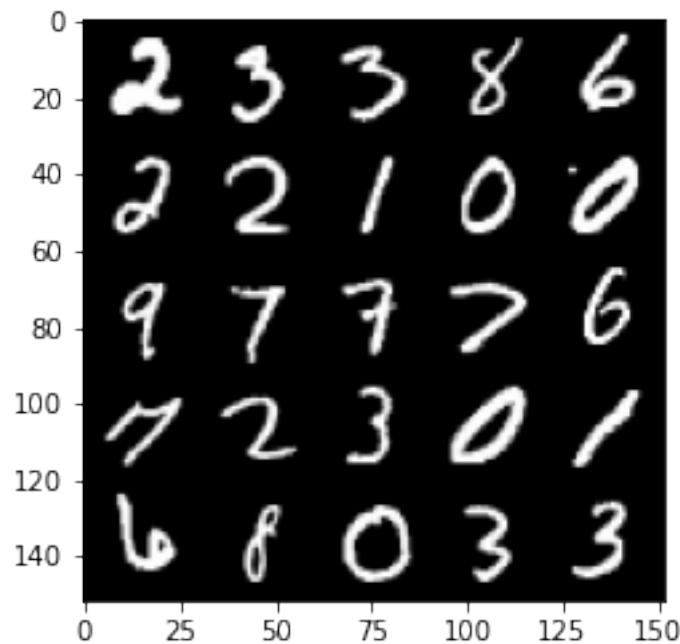
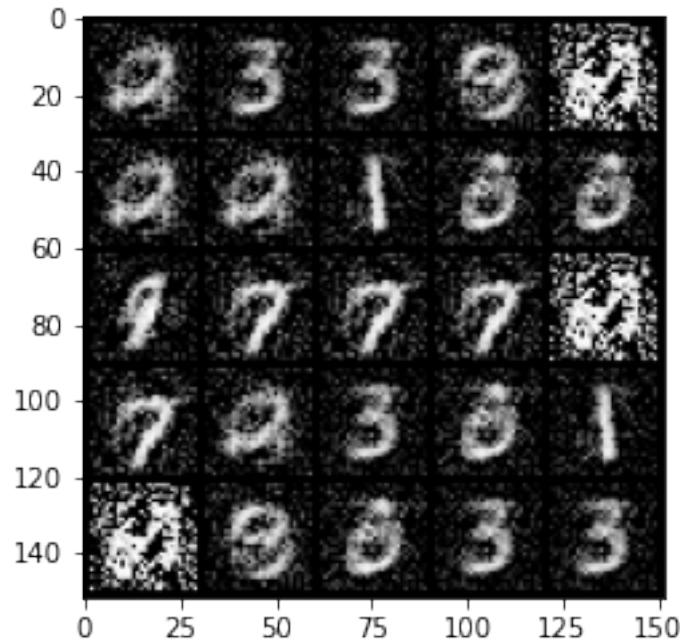
```
Epoch 280, step 131500 -> generator loss: 0.4631380336284634, discriminator
loss: 0.6802677038908005
```





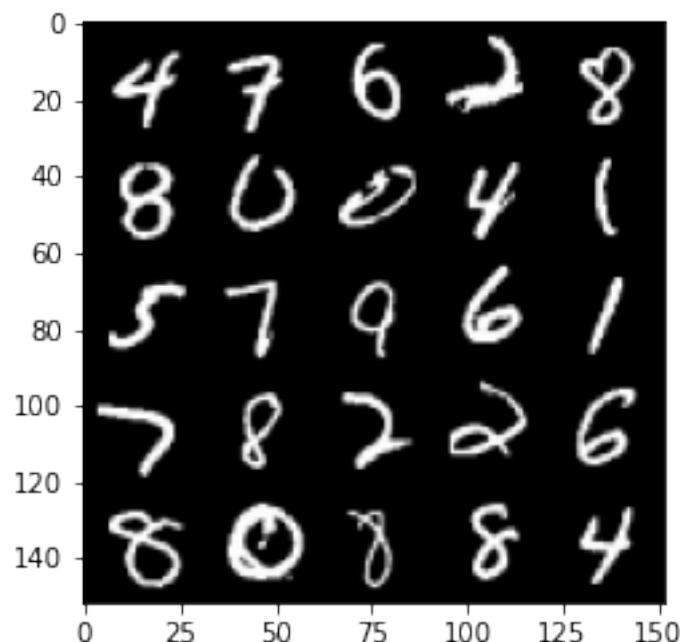
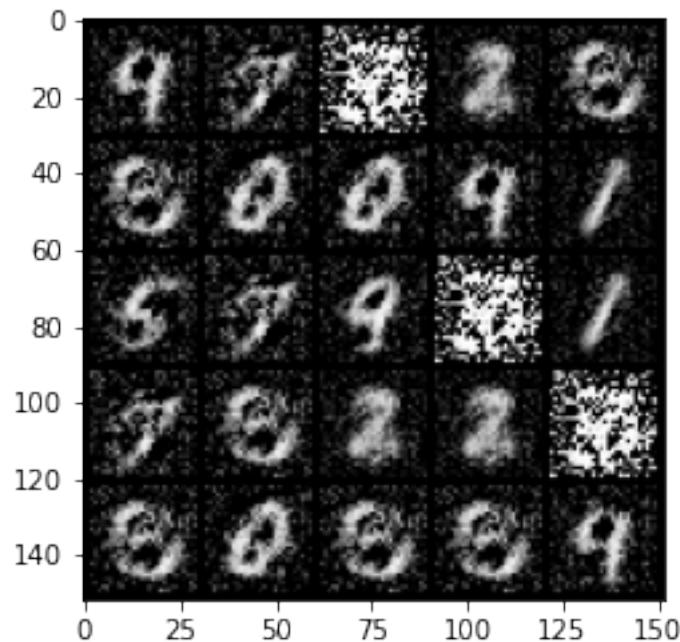
```
100% | 469/469 [00:14<00:00, 31.37it/s]
45% | 210/469 [00:06<00:07, 33.67it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 281, step 132000 -> generator loss: 0.4647863751053807, discriminator loss: 0.6832426165342332



```
100%|      | 469/469 [00:14<00:00, 32.57it/s]
51%|      | 241/469 [00:07<00:08, 27.25it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

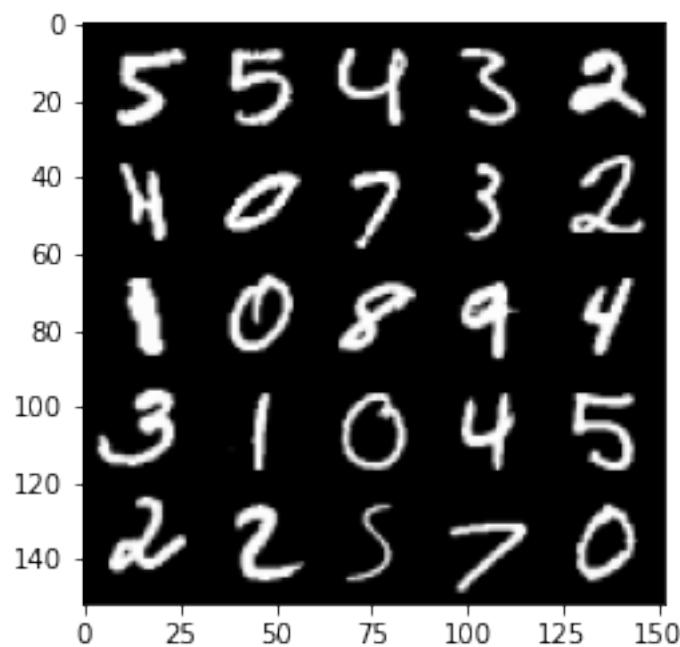
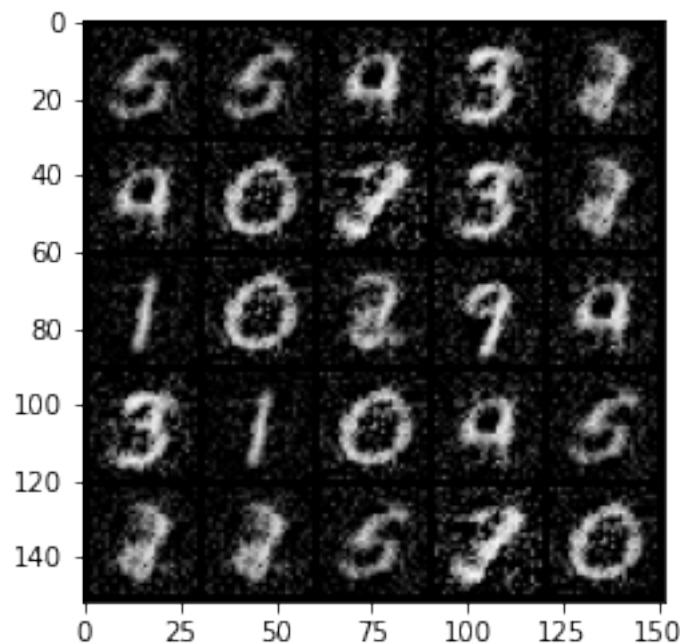
Epoch 282, step 132500 -> generator loss: 0.47090927863121007, discriminator loss: 0.6617664283514025



100% | 469/469 [00:15<00:00, 30.11it/s]

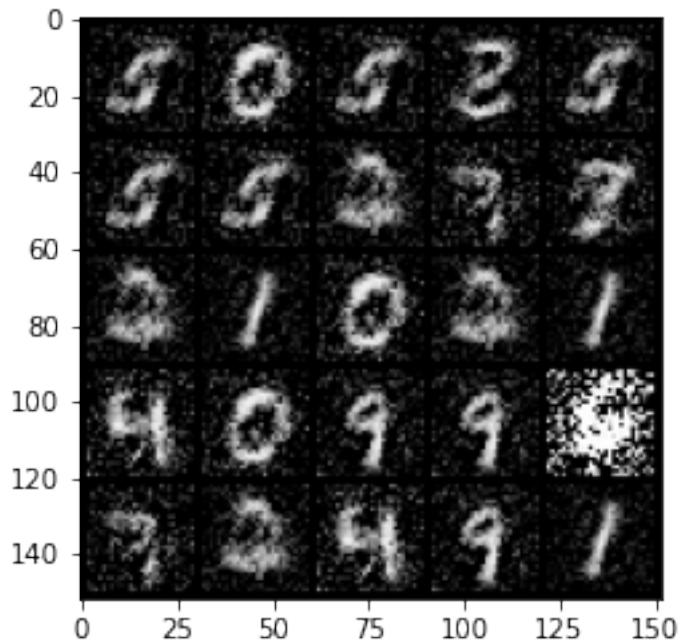
58%| 272/469 [00:09<00:08, 23.21it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

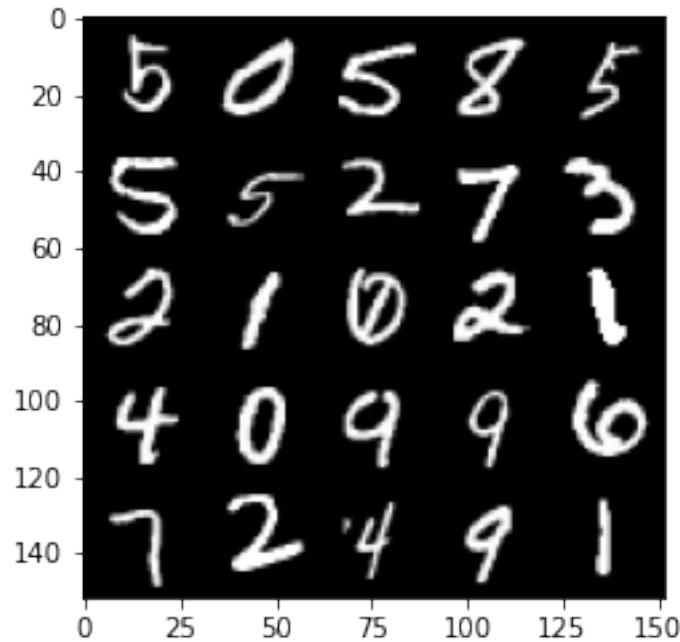
Epoch 283, step 133000 -> generator loss: 0.46349392336606976, discriminator loss: 0.6760821763277048



```
100%|      | 469/469 [00:18<00:00, 25.19it/s]
64%|      | 302/469 [00:09<00:05, 33.13it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

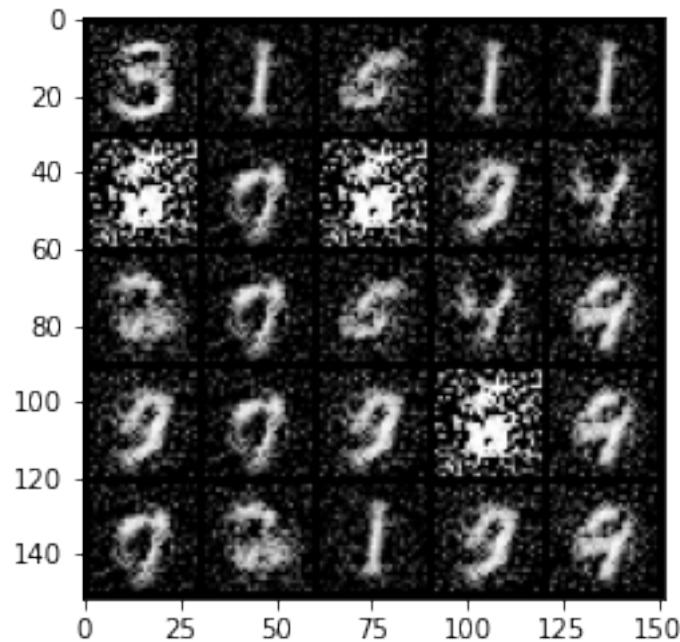
Epoch 284, step 133500 -> generator loss: 0.4689989905953408, discriminator loss: 0.665203310608864

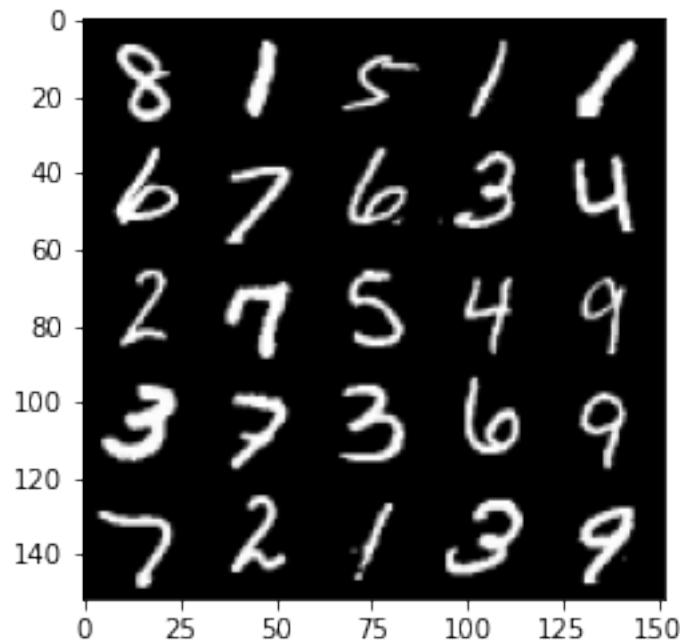




```
100%|      | 469/469 [00:16<00:00, 28.80it/s]
71%|      | 333/469 [00:10<00:04, 33.56it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

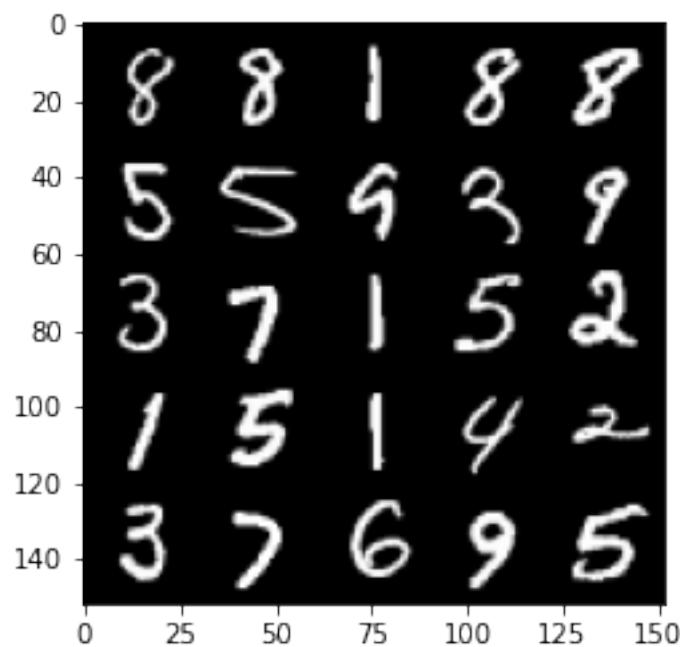
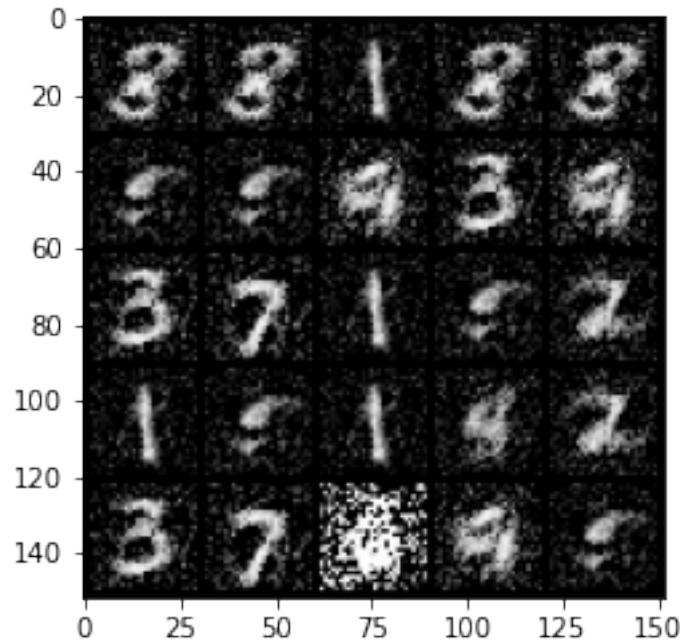
Epoch 285, step 134000 -> generator loss: 0.4700063539147381, discriminator loss: 0.6754494820833207





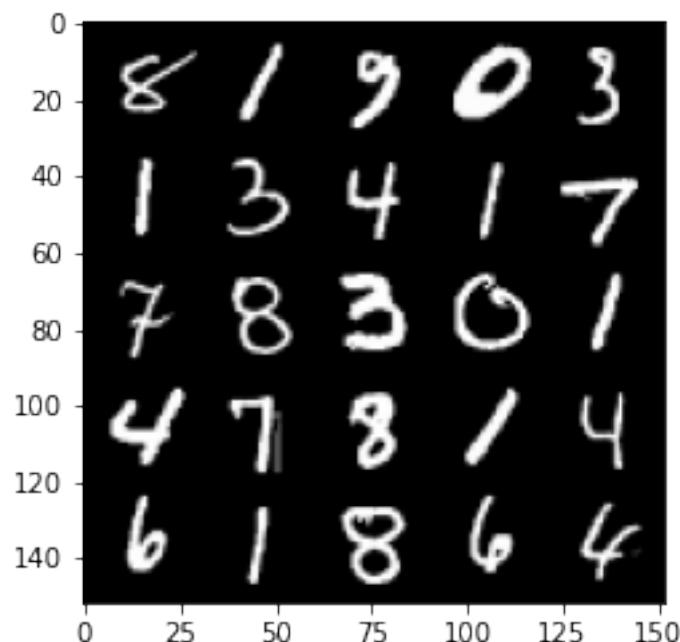
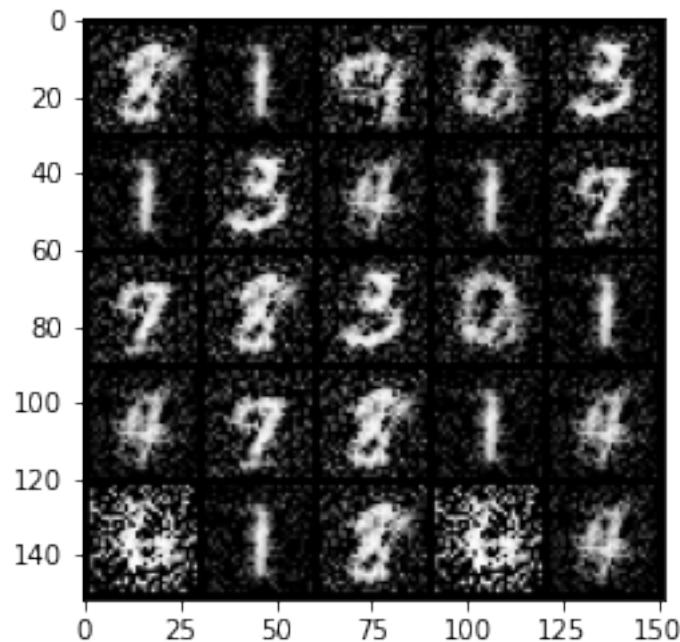
```
100%|      | 469/469 [00:14<00:00, 32.20it/s]
78%|      | 366/469 [00:10<00:03, 33.94it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 286, step 134500 -> generator loss: 0.4597119756937027, discriminator
loss: 0.6827935619354246
```



```
100%|      | 469/469 [00:14<00:00, 32.65it/s]
84%|      | 395/469 [00:11<00:02, 34.50it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

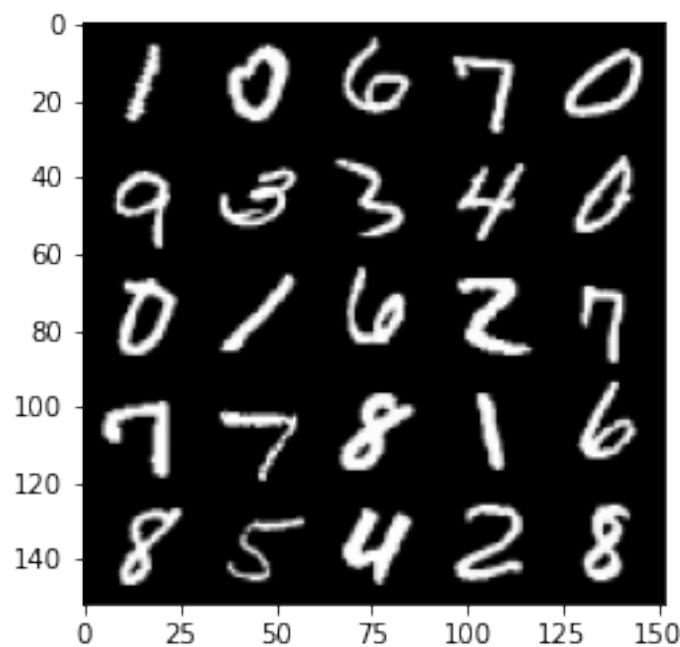
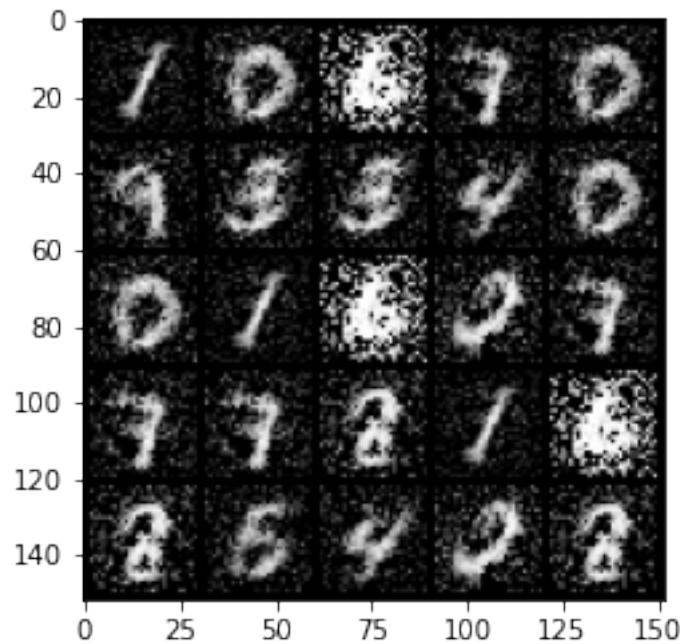
Epoch 287, step 135000 -> generator loss: 0.46039511388540266, discriminator loss: 0.6917502034902564



100% | 469/469 [00:14<00:00, 32.47it/s]

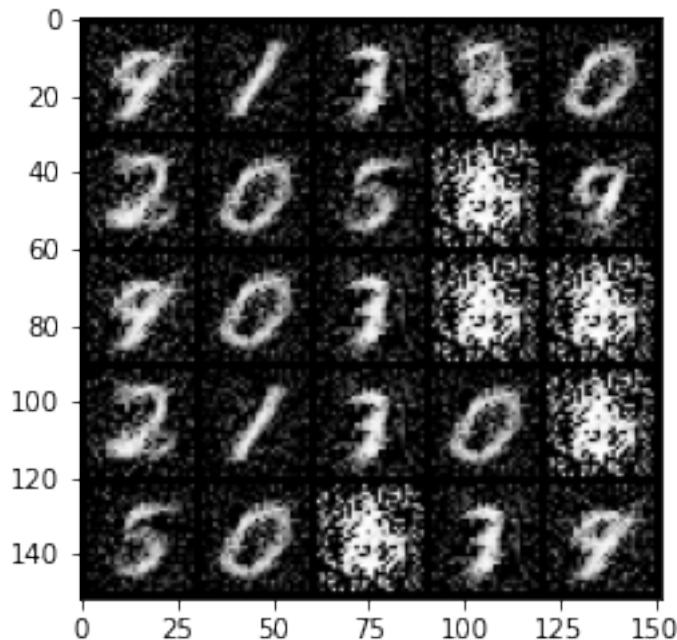
91%| 427/469 [00:12<00:01, 33.65it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

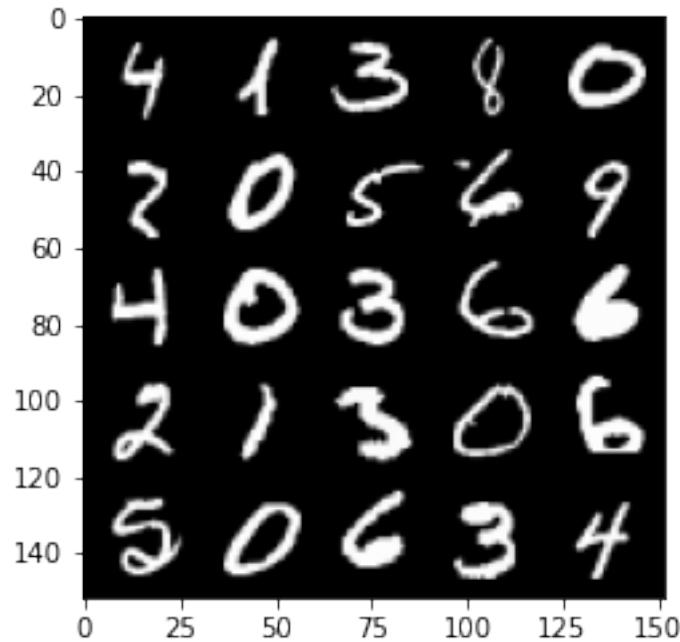
Epoch 288, step 135500 -> generator loss: 0.4570645353794095, discriminator loss: 0.6930271481275562



```
100%|     | 469/469 [00:14<00:00, 32.40it/s]
97%|     | 456/469 [00:13<00:00, 34.09it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

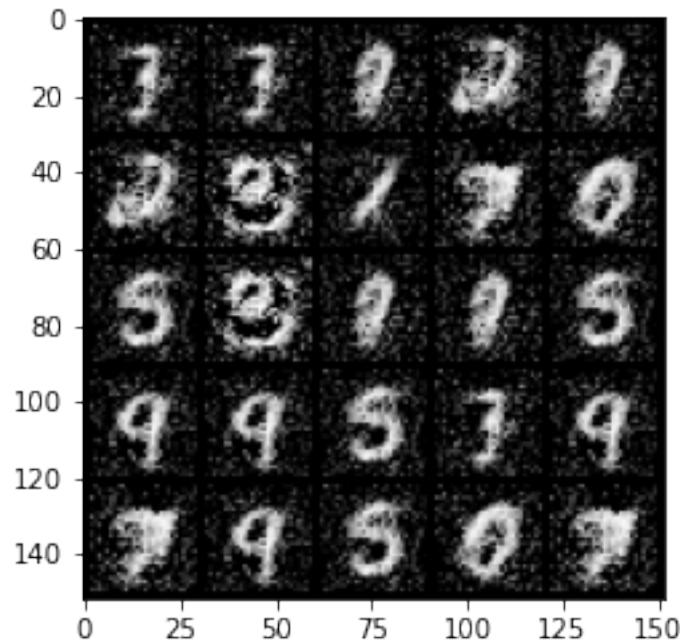
```
Epoch 289, step 136000 -> generator loss: 0.46291841572523124, discriminator
loss: 0.6780110524892806
```

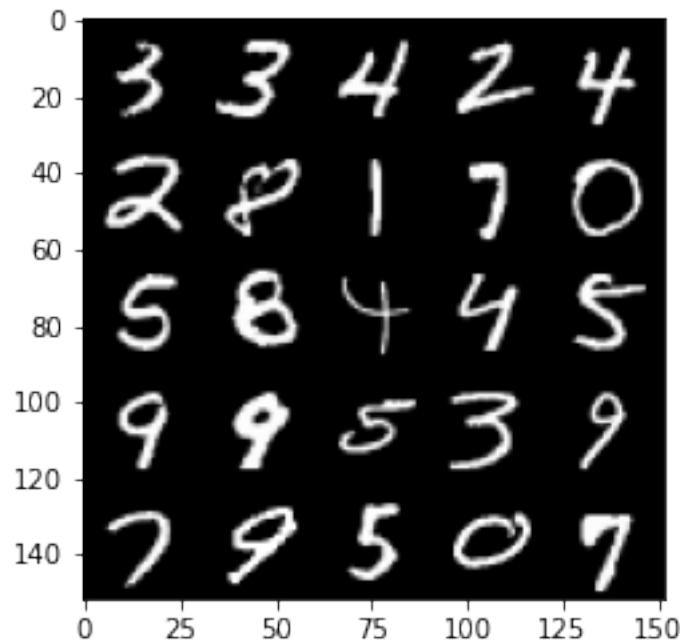




```
100%|   | 469/469 [00:14<00:00, 32.92it/s]
100%|   | 469/469 [00:13<00:00, 33.81it/s]
  4%|   | 21/469 [00:00<00:13, 32.15it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

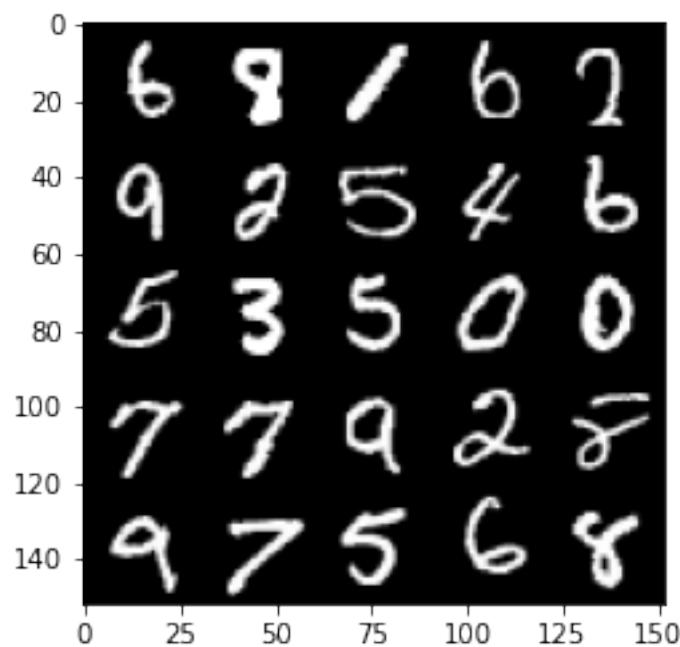
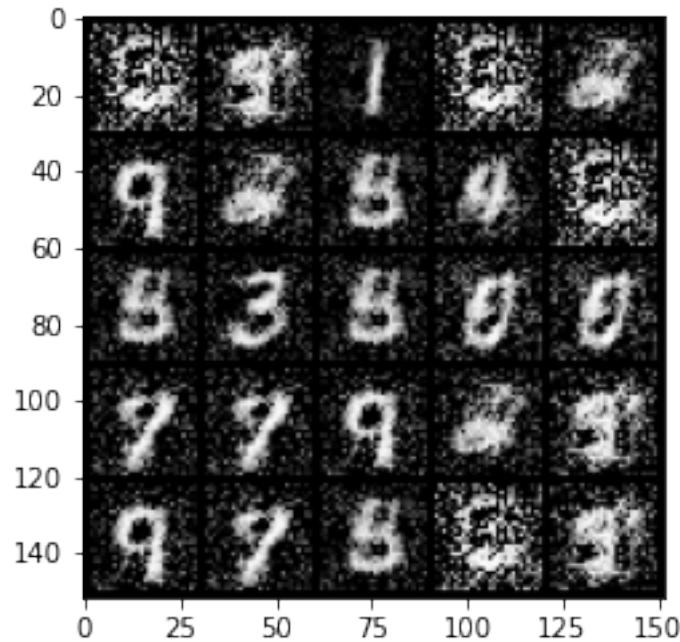
Epoch 291, step 136500 -> generator loss: 0.47933737951517097, discriminator
loss: 0.6569577589035035
```





```
100%| 469/469 [00:14<00:00, 32.48it/s]
11%| 52/469 [00:01<00:12, 32.25it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

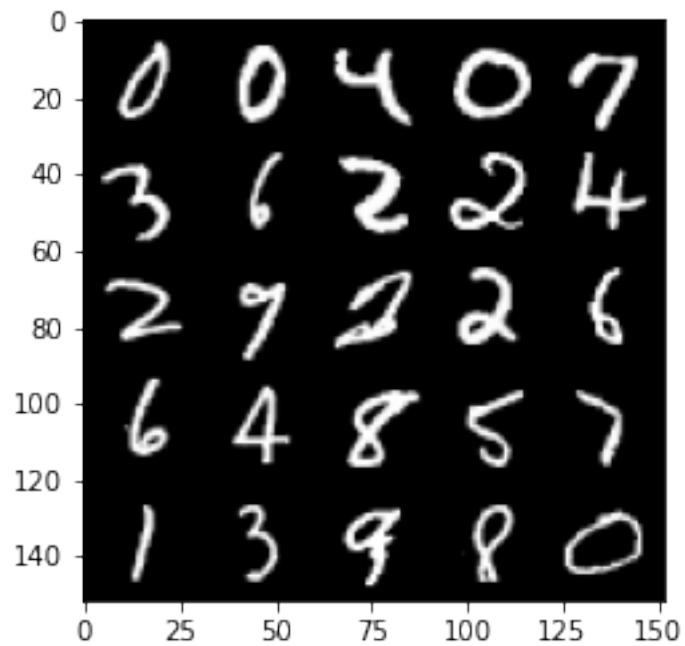
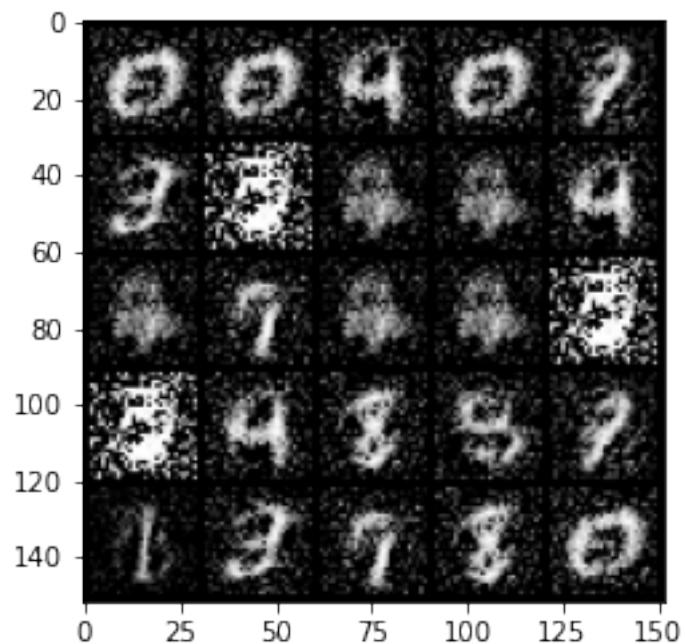
```
Epoch 292, step 137000 -> generator loss: 0.4810231389999388, discriminator
loss: 0.6530736558437347
```



```
100%| 469/469 [00:14<00:00, 32.62it/s]
17%| 82/469 [00:02<00:11, 32.45it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 293, step 137500 -> generator loss: 0.4748702455163, discriminator loss:

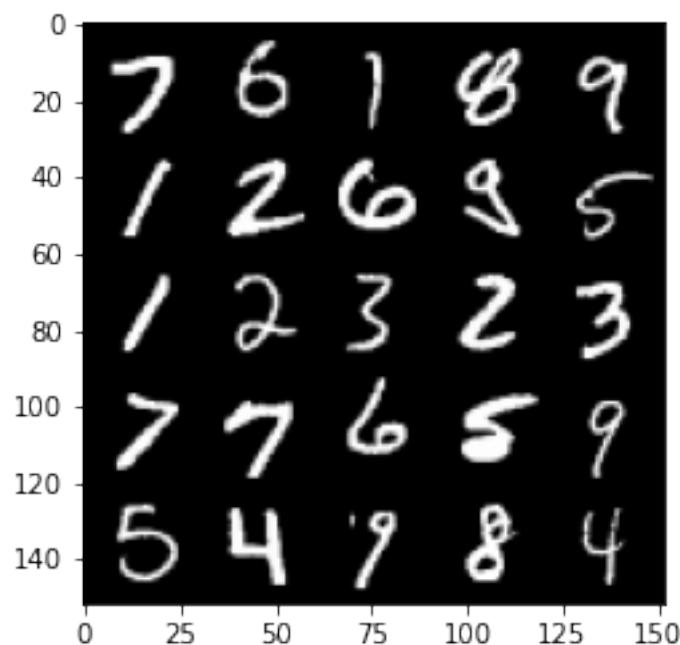
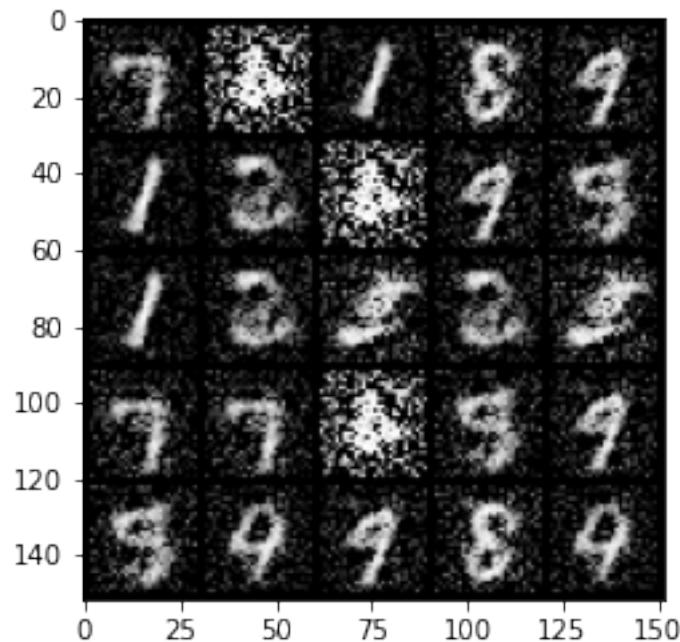
0.6585967144966132



100% | 469/469 [00:14<00:00, 32.59it/s]  
24% | 111/469 [00:03<00:10, 34.11it/s] Clipping input data to the

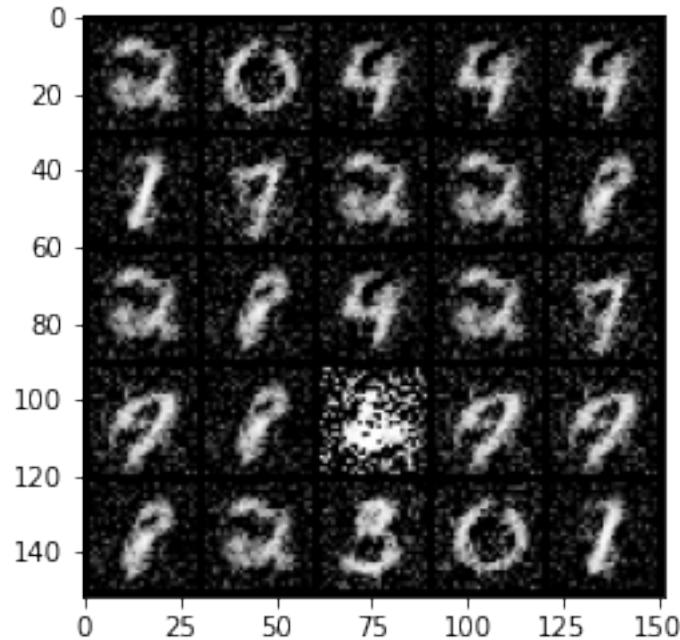
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

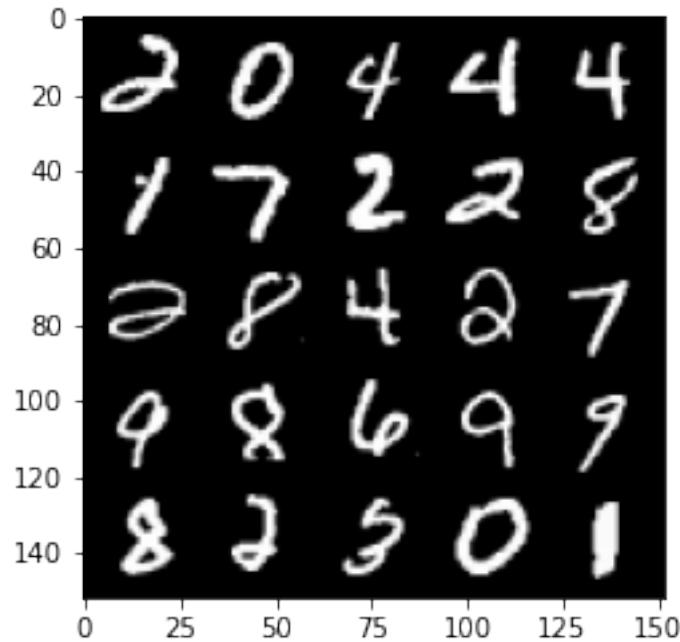
Epoch 294, step 138000 -> generator loss: 0.46368297964334476, discriminator loss: 0.6909083163738253



```
100%|    | 469/469 [00:14<00:00, 32.86it/s]
30%|    | 143/469 [00:04<00:09, 34.57it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

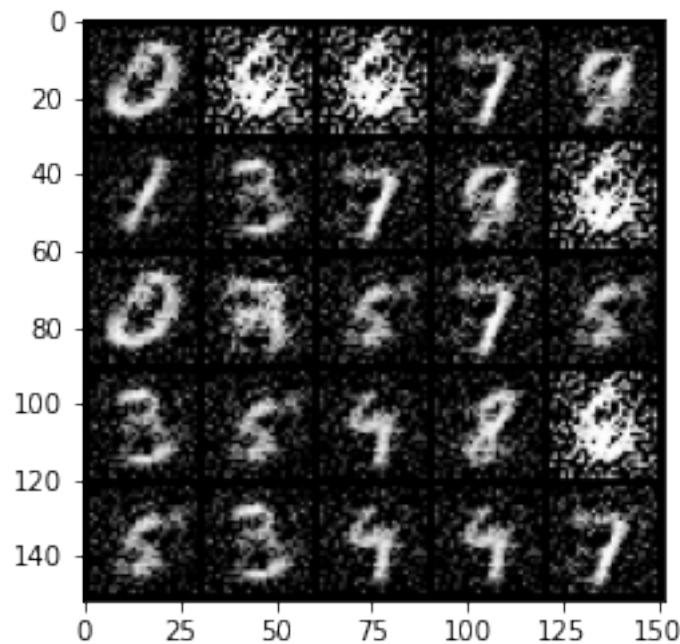
Epoch 295, step 138500 -> generator loss: 0.4614730784893038, discriminator  
loss: 0.6878573391437531

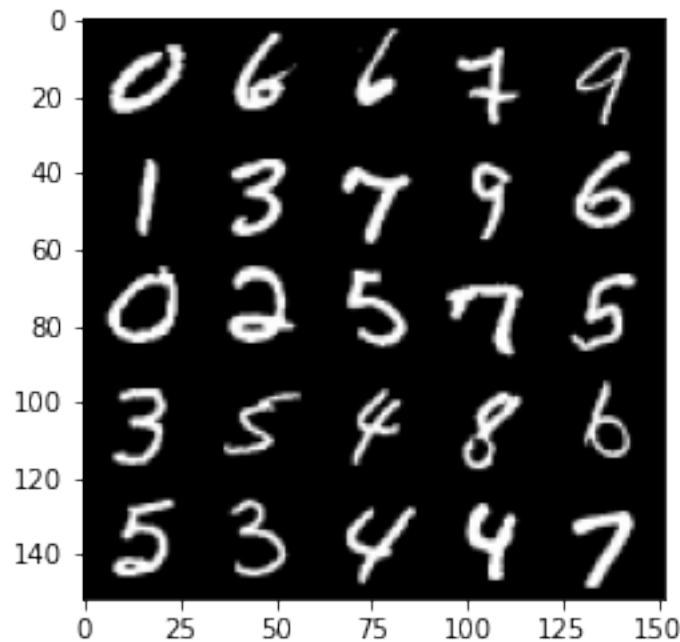




```
100%|      | 469/469 [00:14<00:00, 32.44it/s]
37%|      | 175/469 [00:05<00:08, 33.03it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

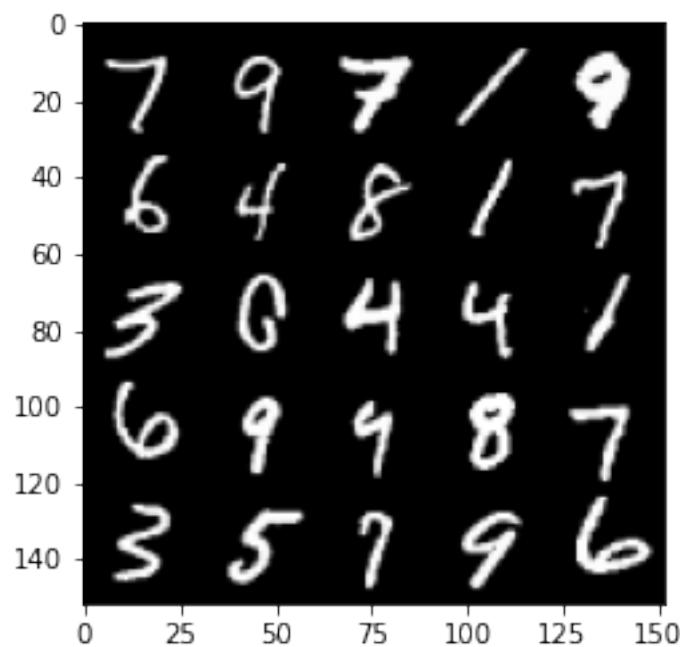
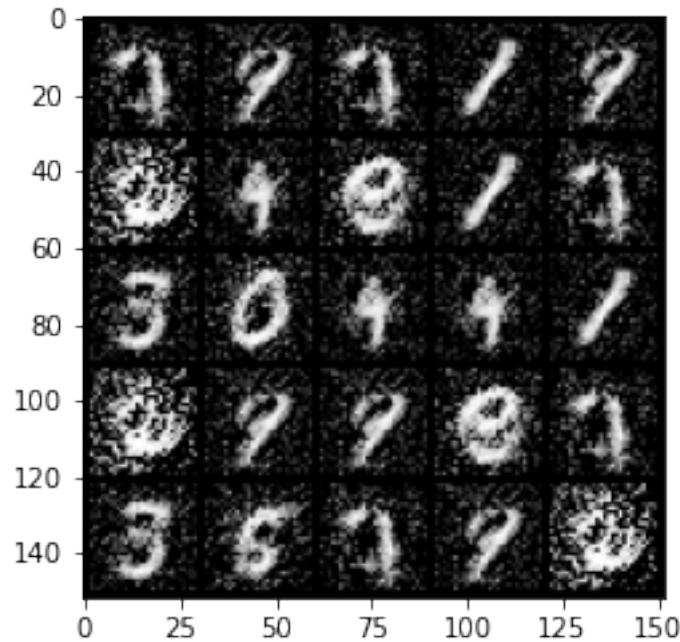
Epoch 296, step 139000 -> generator loss: 0.4489934691190716, discriminator loss: 0.7056127293109893





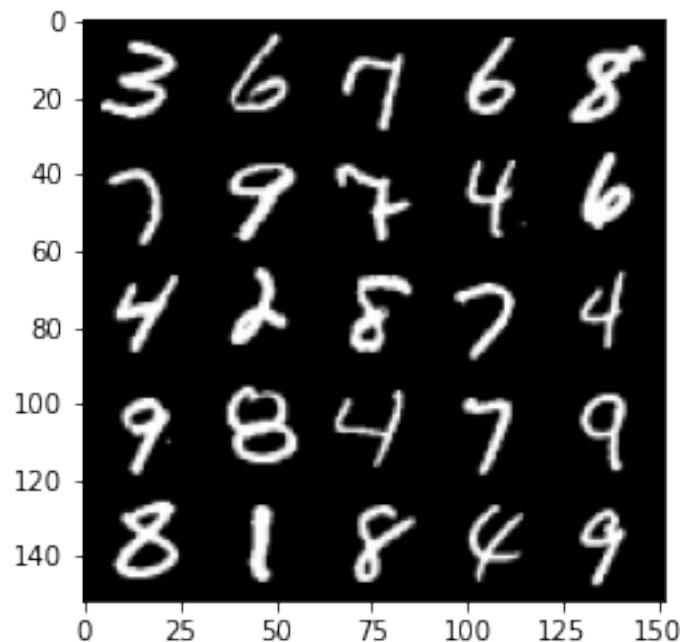
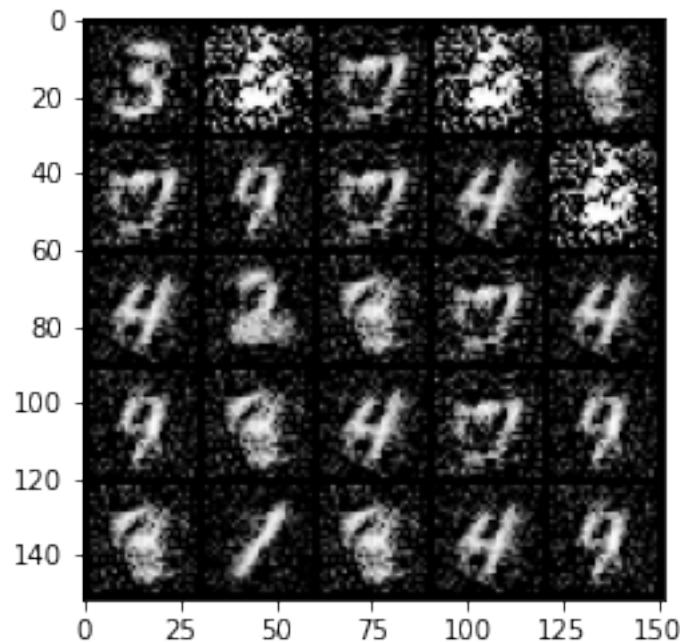
```
100% | 469/469 [00:16<00:00, 28.19it/s]
44% | 206/469 [00:06<00:07, 33.20it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 297, step 139500 -> generator loss: 0.46546694624423995, discriminator
loss: 0.6729359281063072
```



```
100%|      | 469/469 [00:15<00:00, 31.20it/s]
51%|      | 237/469 [00:07<00:06, 34.15it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

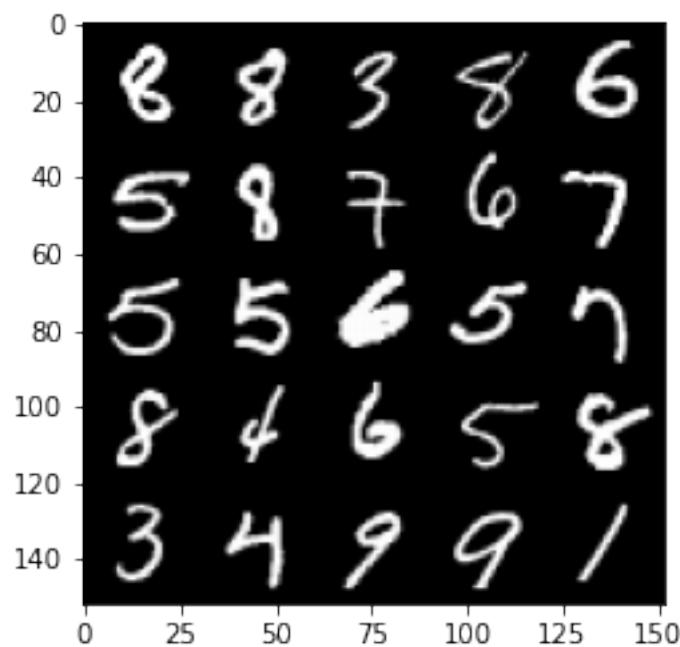
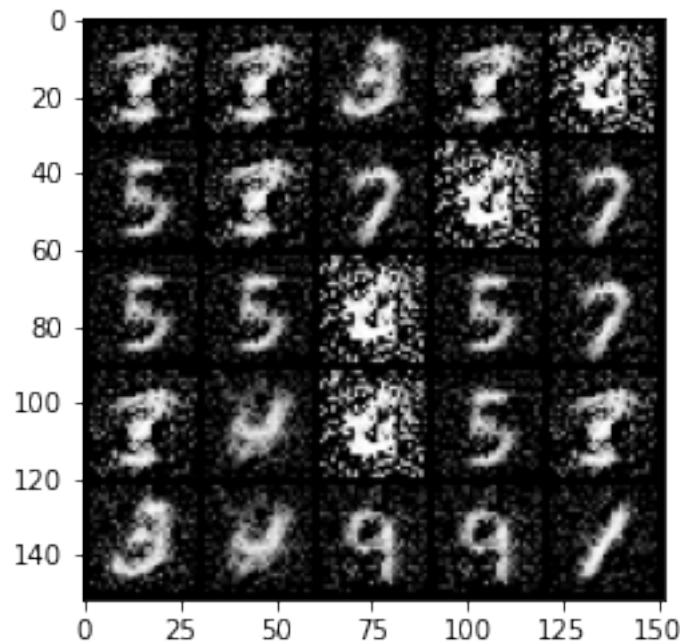
Epoch 298, step 140000 -> generator loss: 0.4740954222679137, discriminator loss: 0.6694054957628239



100% | 469/469 [00:14<00:00, 32.31it/s]

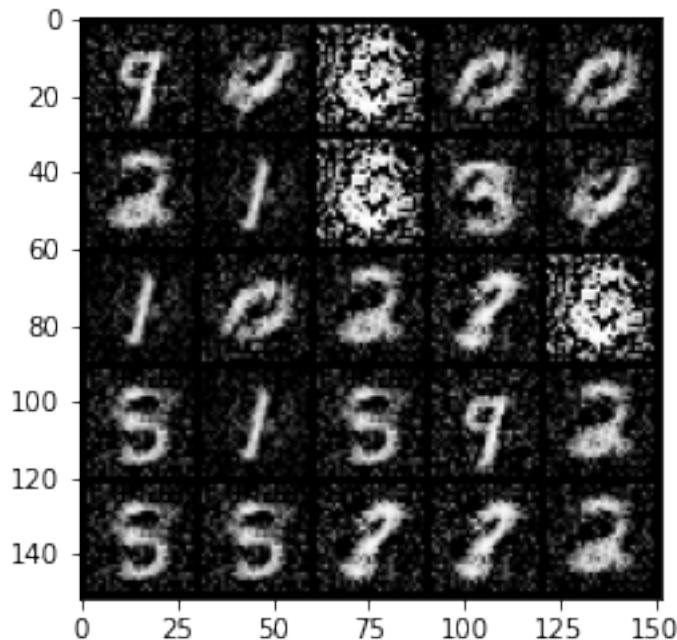
57%| 267/469 [00:07<00:05, 34.05it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

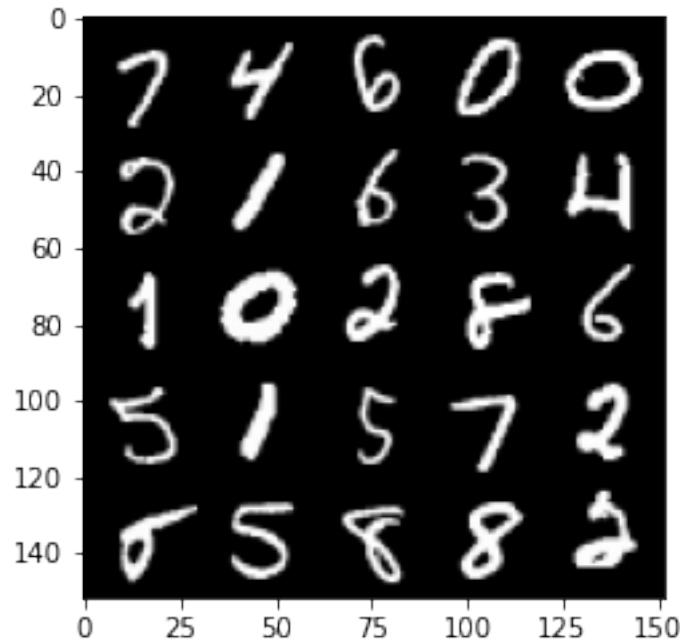
Epoch 299, step 140500 -> generator loss: 0.47440504390001287, discriminator loss: 0.6719152910709381



```
100%|      | 469/469 [00:14<00:00, 32.61it/s]
63%|      | 297/469 [00:09<00:04, 34.51it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

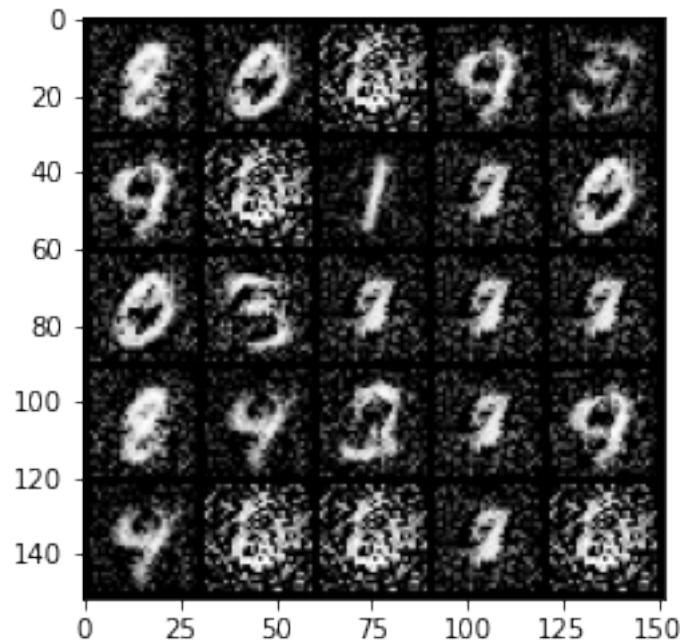
Epoch 300, step 141000 -> generator loss: 0.4680447776317594, discriminator loss: 0.672106882333756

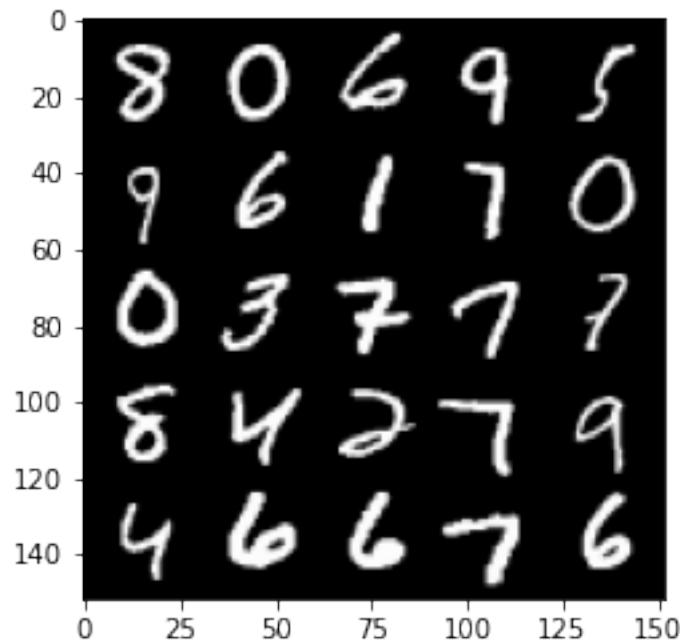




```
100%| 469/469 [00:14<00:00, 31.40it/s]
70%| 330/469 [00:09<00:04, 33.63it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

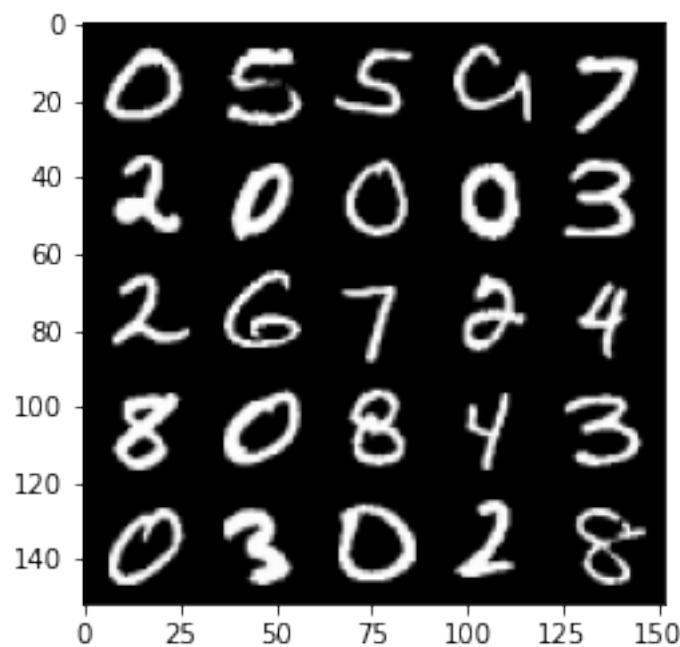
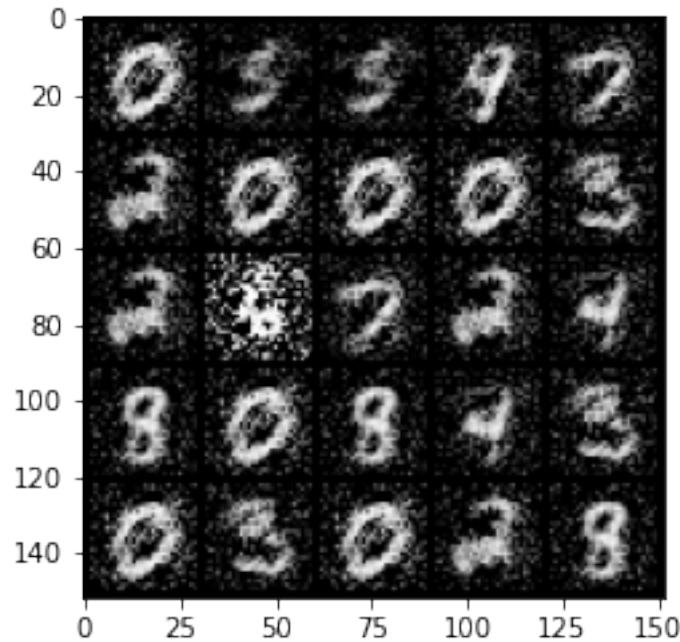
```
Epoch 301, step 141500 -> generator loss: 0.4682793046832079, discriminator
loss: 0.6729071778059011
```





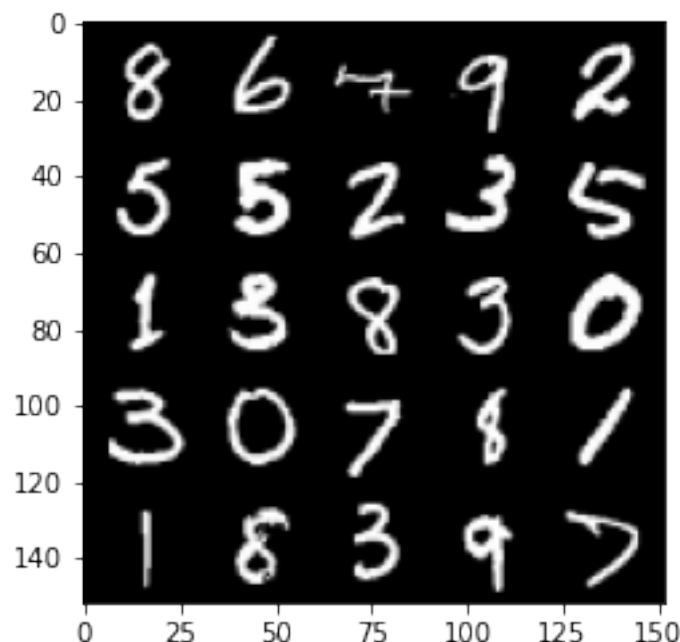
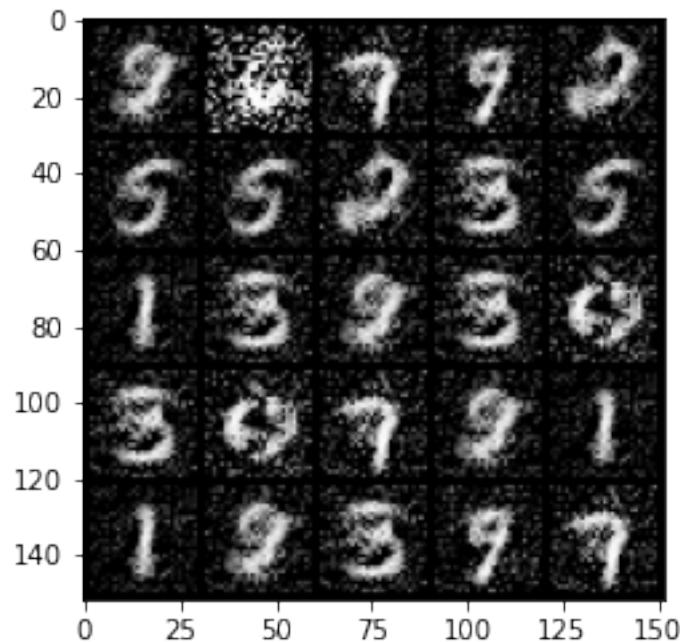
```
100%|      | 469/469 [00:14<00:00, 32.71it/s]
77%|      | 359/469 [00:10<00:03, 34.07it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 302, step 142000 -> generator loss: 0.4625849933028221, discriminator
loss: 0.6797816706895825
```



```
100%|     | 469/469 [00:14<00:00, 32.40it/s]
83%|     | 390/469 [00:11<00:02, 33.90it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

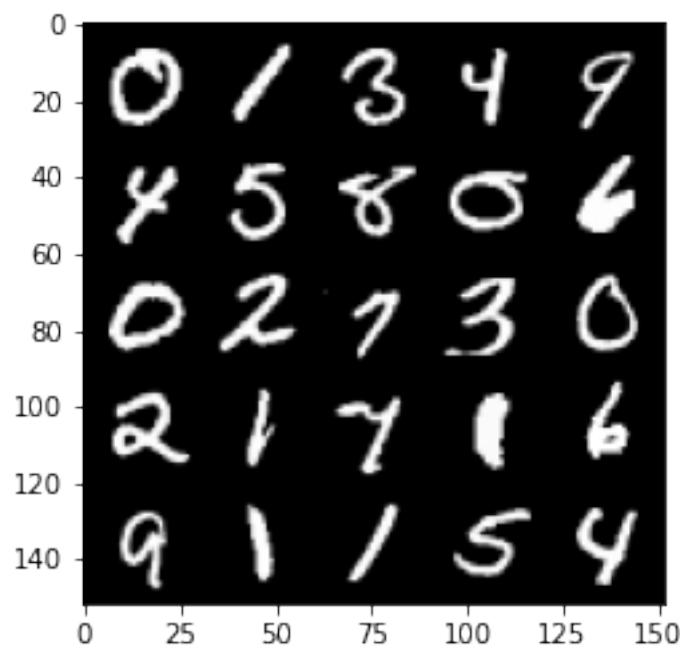
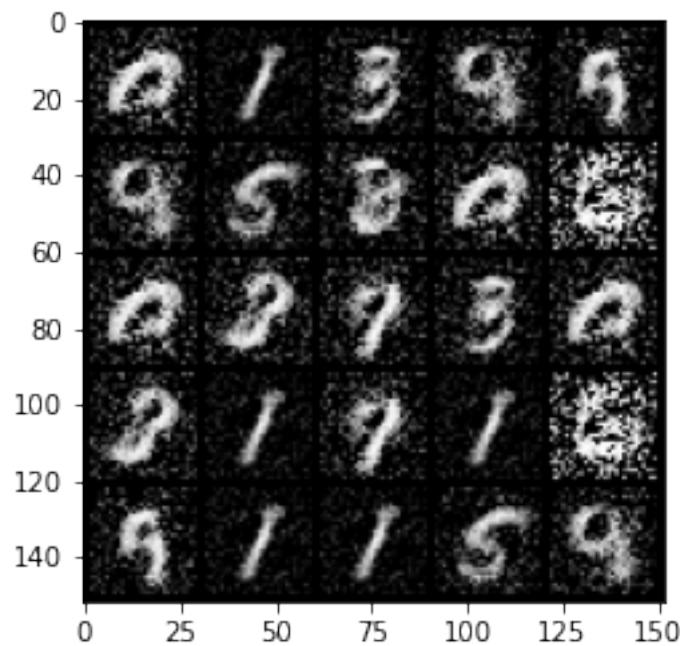
Epoch 303, step 142500 -> generator loss: 0.45855972379446036, discriminator loss: 0.6937705738544467



100% | 469/469 [00:14<00:00, 32.78it/s]

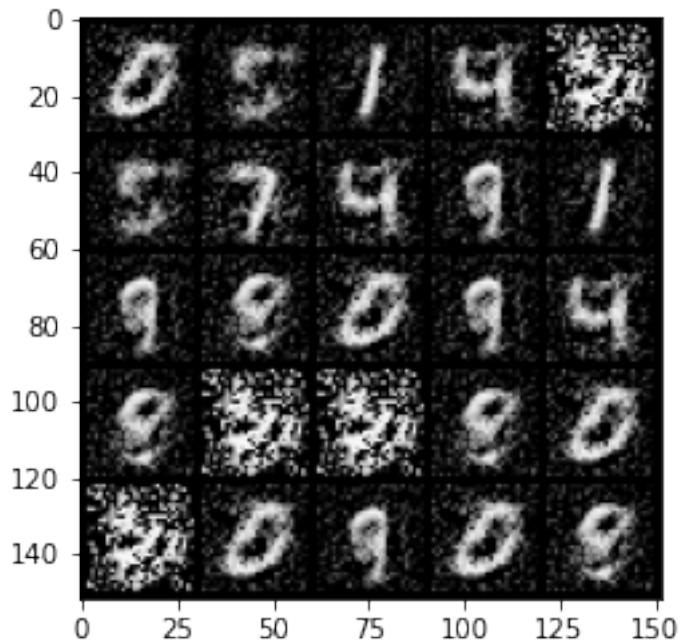
90%| 422/469 [00:12<00:01, 33.77it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

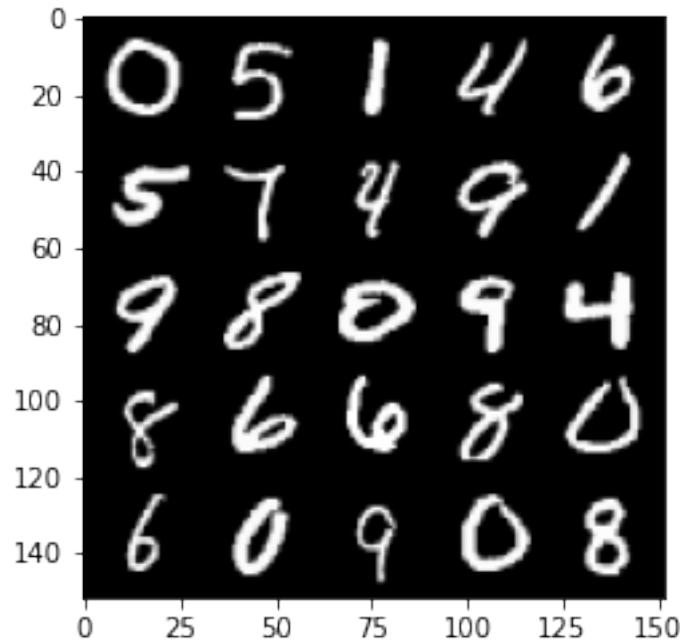
Epoch 304, step 143000 -> generator loss: 0.4671529465317731, discriminator loss: 0.678236240267754



```
100%|     | 469/469 [00:14<00:00, 32.57it/s]
97%|     | 454/469 [00:13<00:00, 33.76it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

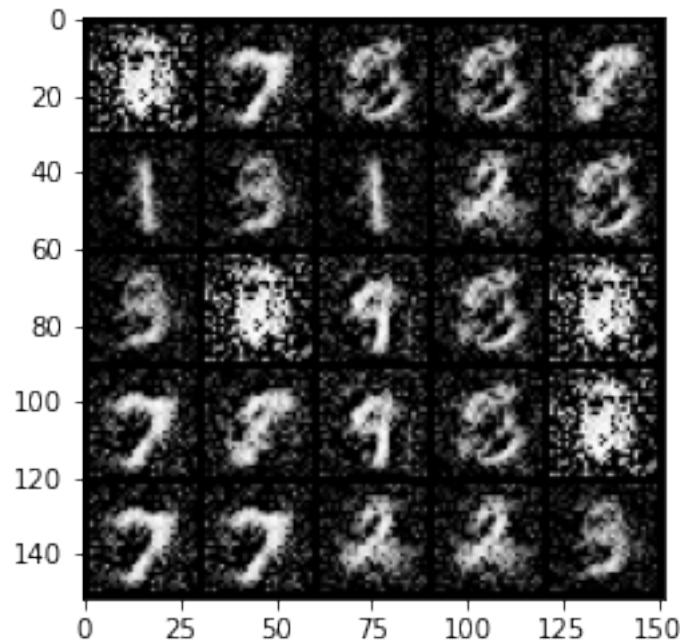
```
Epoch 305, step 143500 -> generator loss: 0.466482456445694, discriminator loss:
0.6740346999168395
```

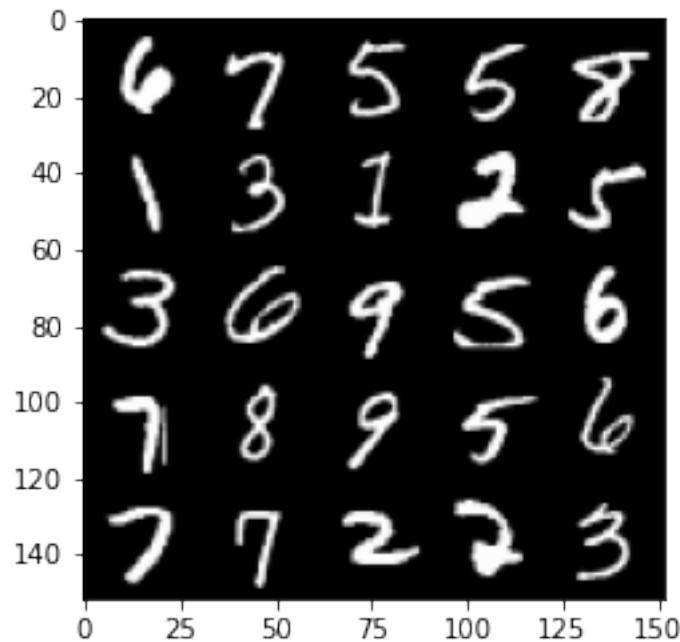




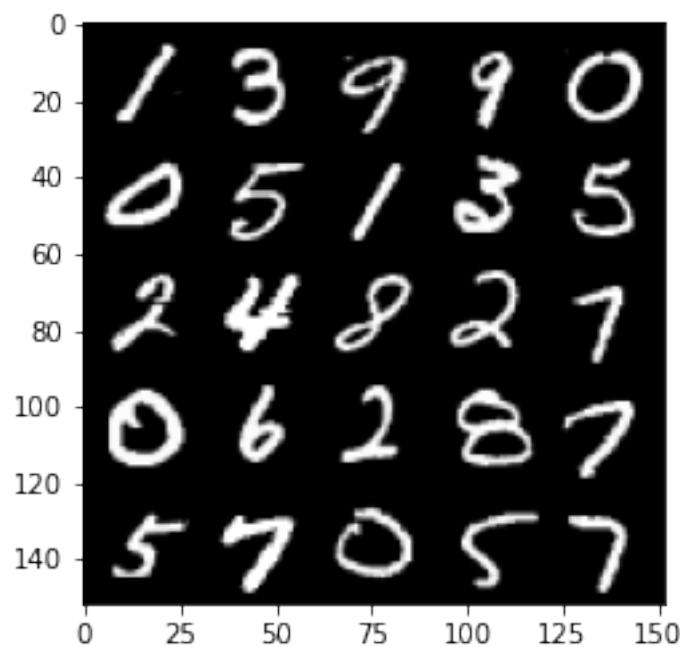
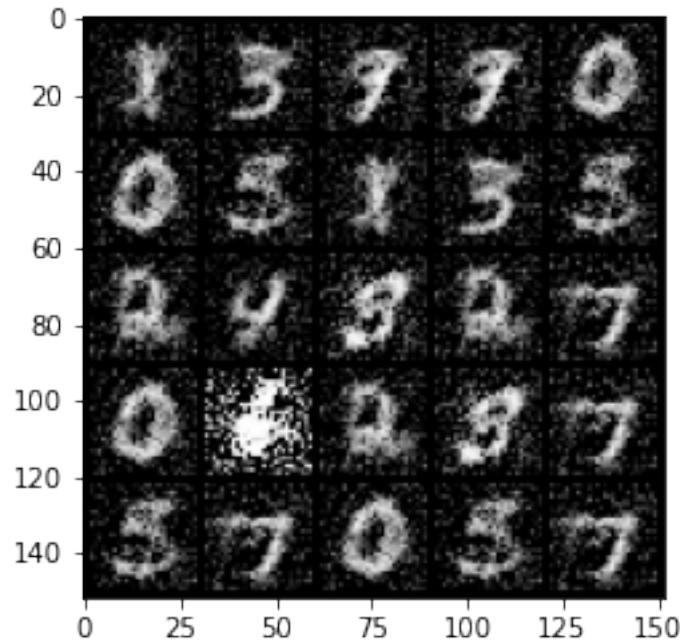
```
100%|   | 469/469 [00:14<00:00, 32.62it/s]
100%|   | 469/469 [00:13<00:00, 33.69it/s]
  3%|   | 15/469 [00:00<00:13, 33.53it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 307, step 144000 -> generator loss: 0.45986973708868056, discriminator
loss: 0.6898981310129167
```





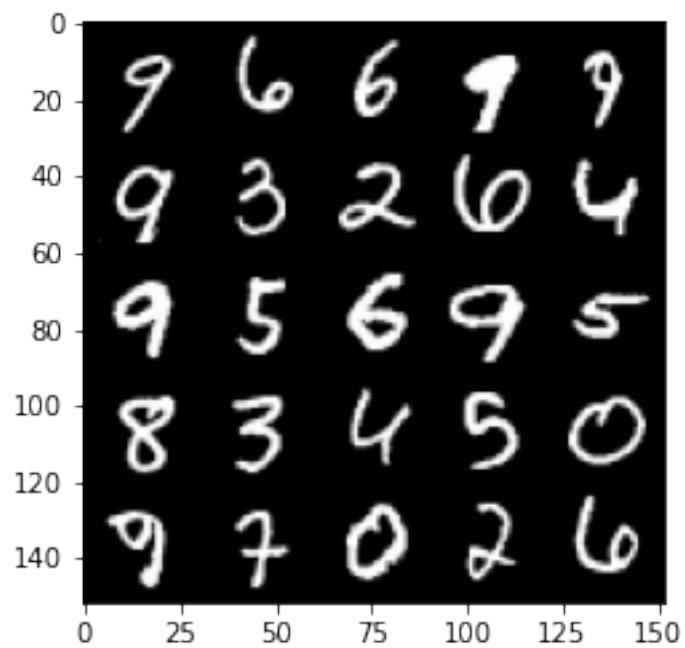
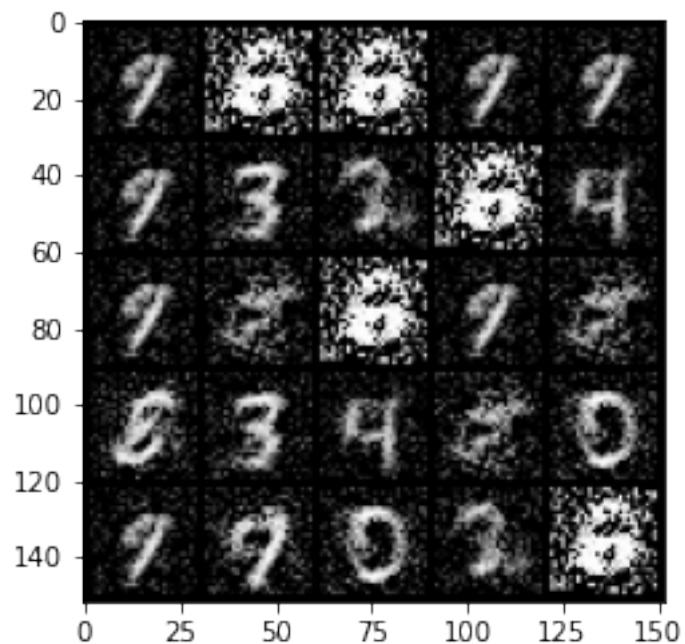
```
100% | 469/469 [00:14<00:00, 32.34it/s]
10% | 46/469 [00:01<00:12, 32.72it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 308, step 144500 -> generator loss: 0.46046394503116644, discriminator
loss: 0.6904676289558411
```



100% | 469/469 [00:14<00:00, 32.69it/s]  
17% | 79/469 [00:02<00:11, 33.59it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 309, step 145000 -> generator loss: 0.47388697266578683, discriminator

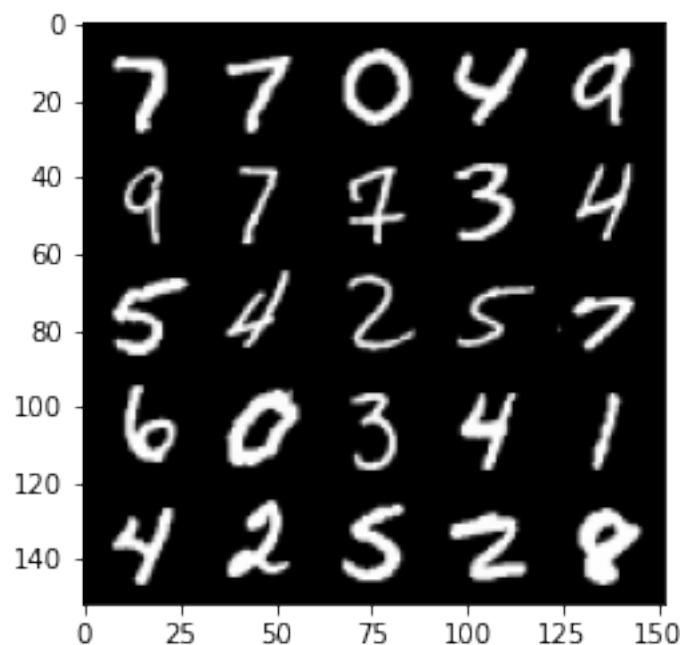
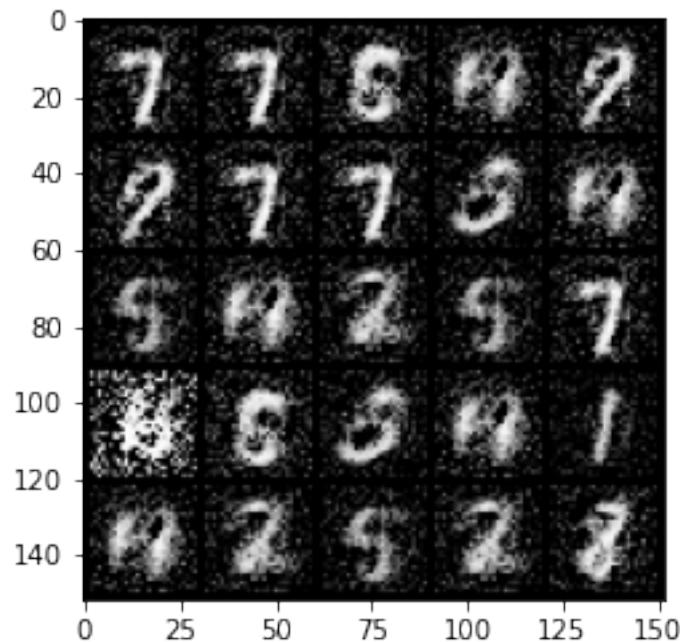
loss: 0.6558151528835297



100% | 469/469 [00:14<00:00, 32.73it/s]  
23% | 109/469 [00:03<00:10, 33.86it/s] Clipping input data to the

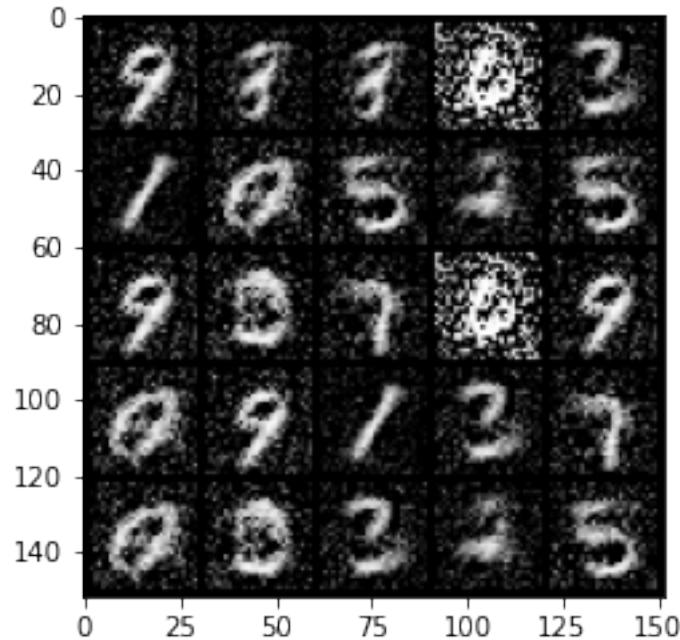
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

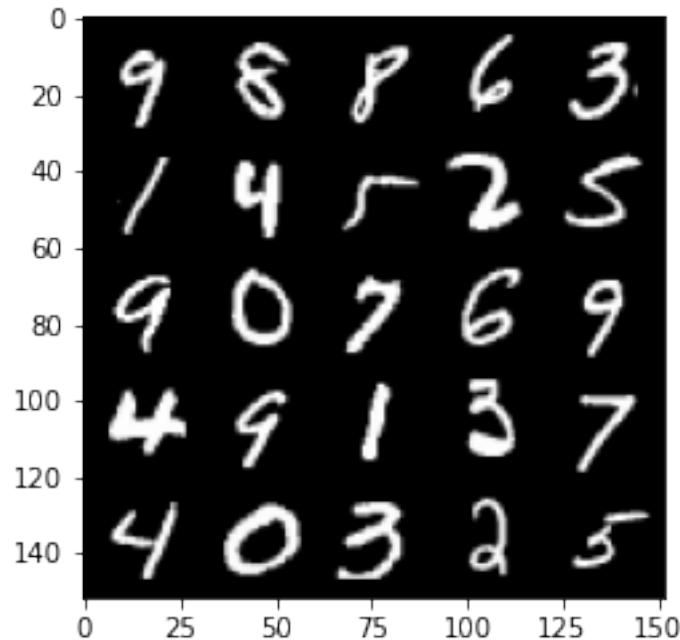
Epoch 310, step 145500 -> generator loss: 0.4672960901260374, discriminator loss: 0.6758906899690629



```
100%|    | 469/469 [00:14<00:00, 33.37it/s]
30%|    | 139/469 [00:03<00:09, 36.41it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

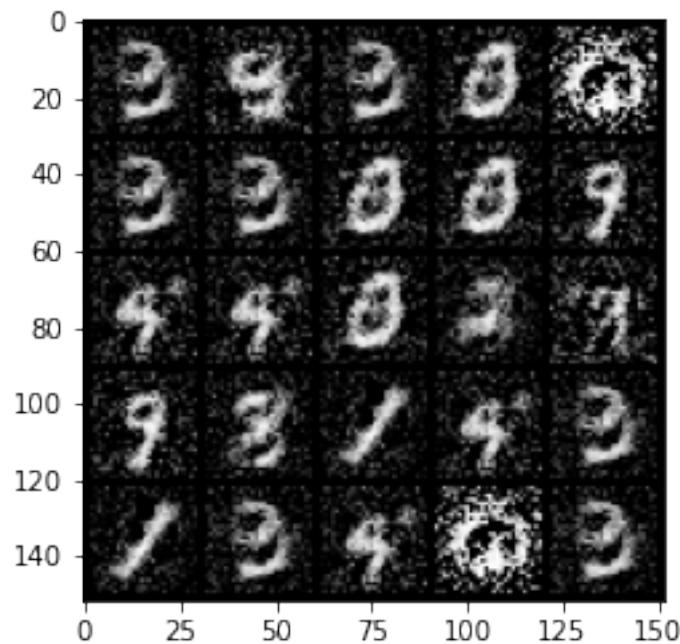
Epoch 311, step 146000 -> generator loss: 0.46796957725286475, discriminator loss: 0.6739634041786196

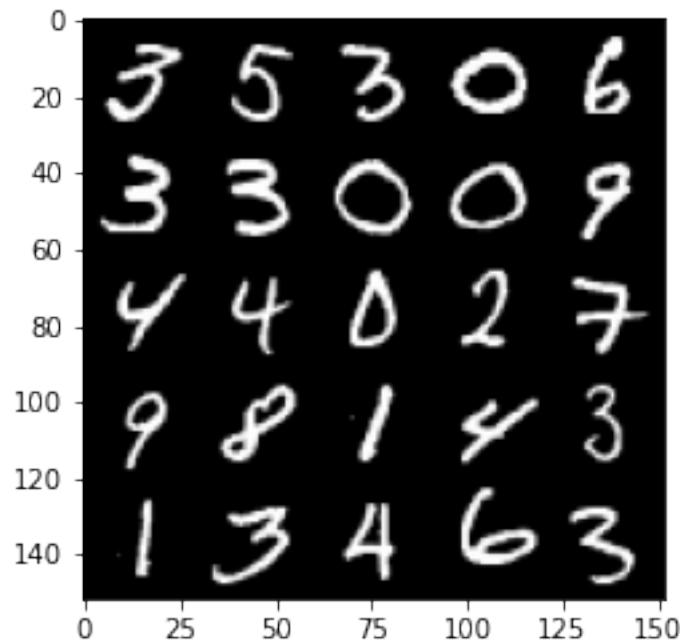




```
100%|      | 469/469 [00:13<00:00, 34.53it/s]
36%|      | 171/469 [00:04<00:08, 34.79it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

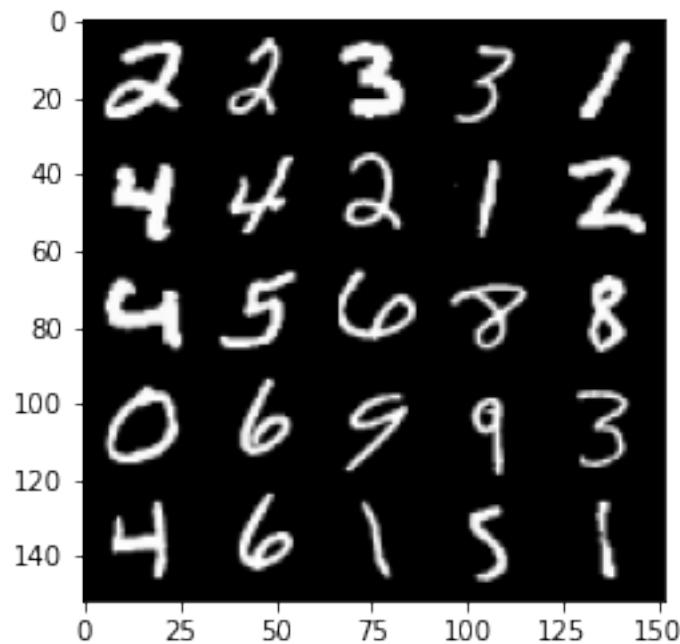
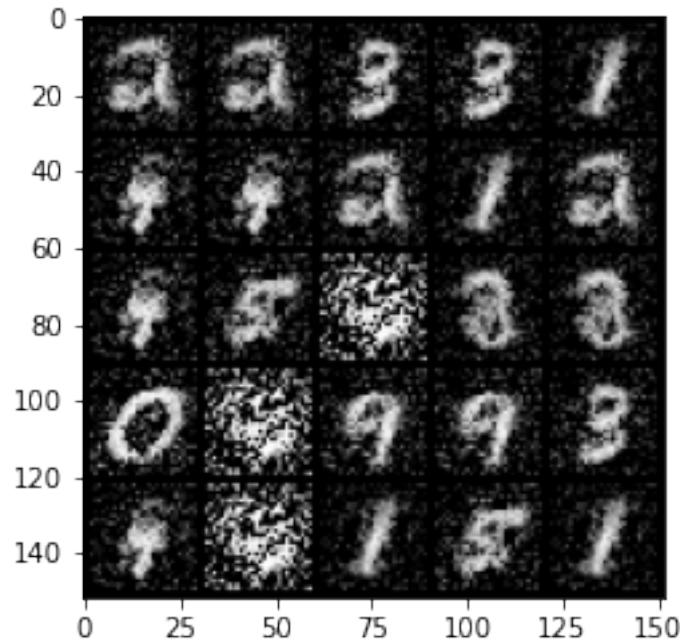
```
Epoch 312, step 146500 -> generator loss: 0.4744441716670988, discriminator
loss: 0.6592911401987076
```





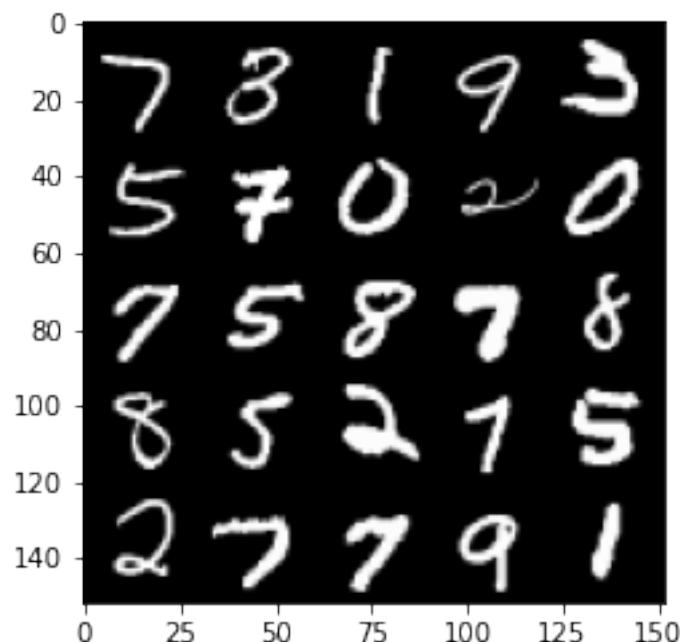
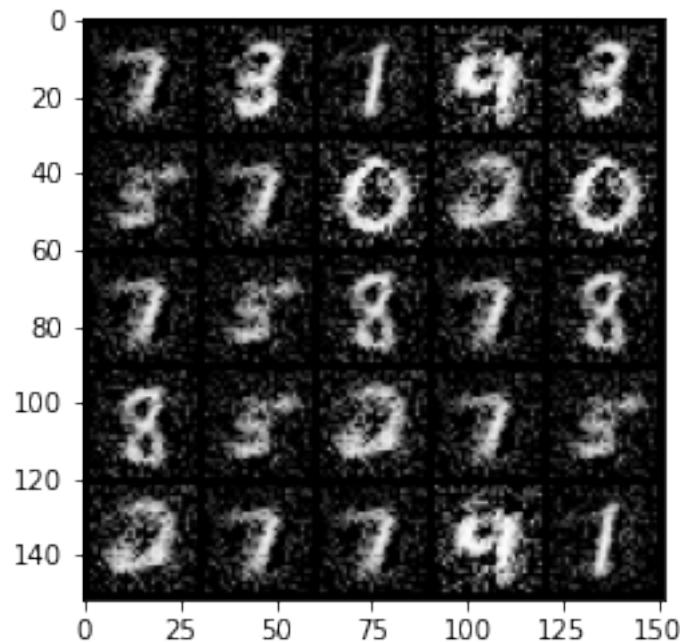
```
100% | 469/469 [00:13<00:00, 34.37it/s]
43% | 203/469 [00:05<00:07, 36.24it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 313, step 147000 -> generator loss: 0.47276825046539334, discriminator loss: 0.664464379429817



```
100%|      | 469/469 [00:13<00:00, 34.52it/s]
49%|      | 232/469 [00:06<00:06, 35.62it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

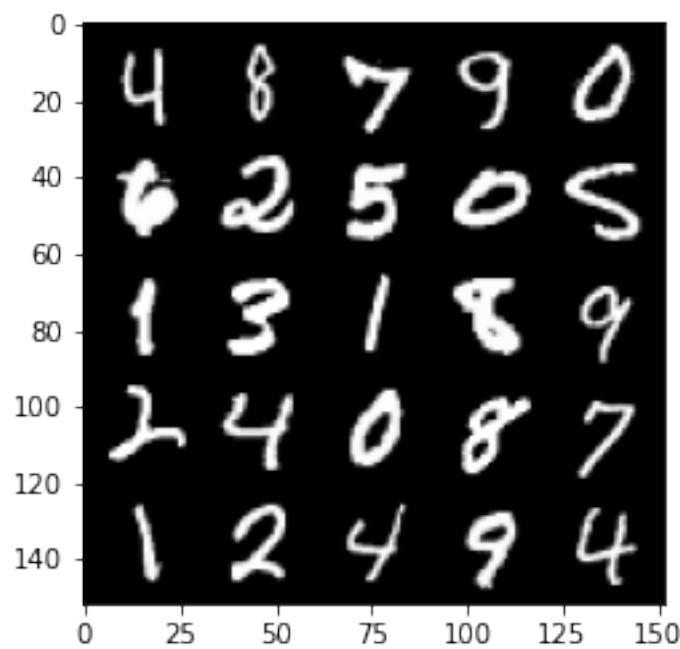
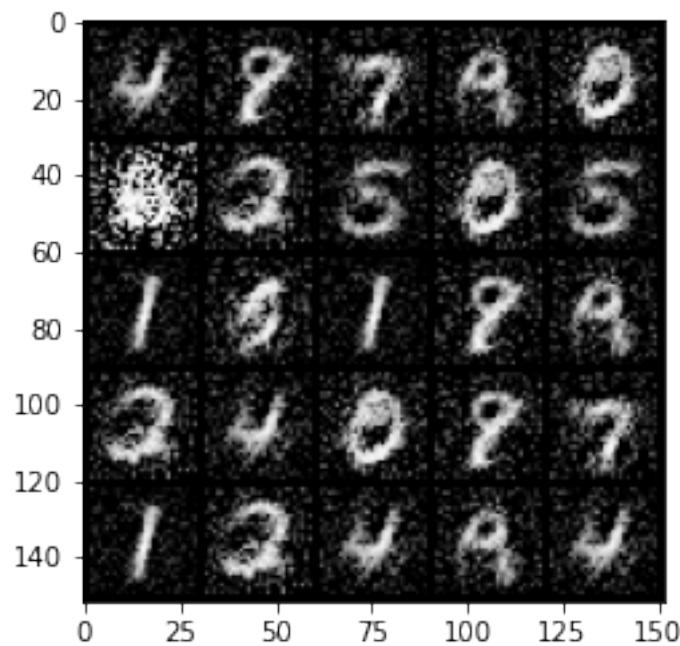
Epoch 314, step 147500 -> generator loss: 0.46638672691583644, discriminator loss: 0.6764000264406203



100% | 469/469 [00:13<00:00, 34.28it/s]

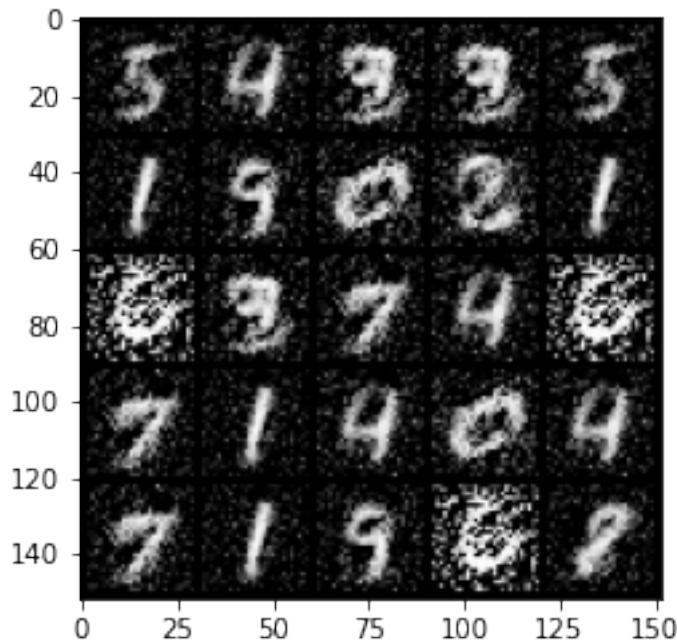
56%| 263/469 [00:07<00:05, 35.00it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

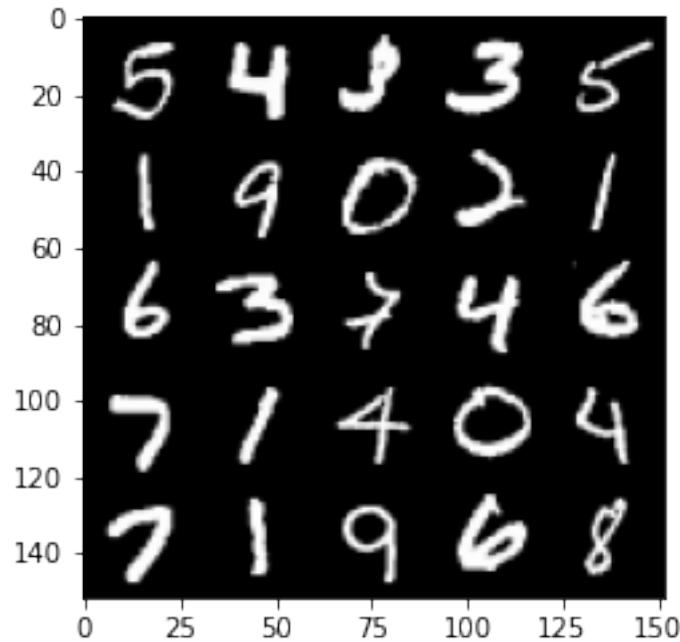
Epoch 315, step 148000 -> generator loss: 0.47372367709875096, discriminator loss: 0.6638614858388899



```
100%|      | 469/469 [00:13<00:00, 34.56it/s]
63%|      | 296/469 [00:08<00:04, 35.81it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

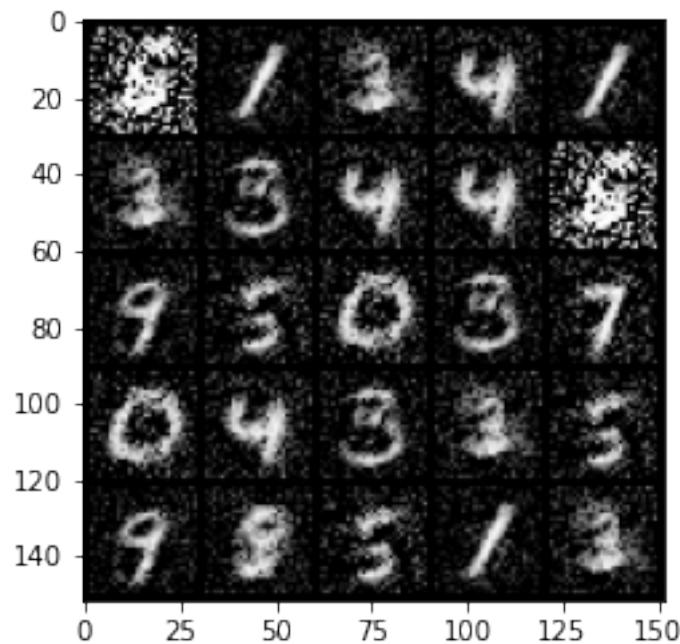
Epoch 316, step 148500 -> generator loss: 0.46062390923500074, discriminator loss: 0.6862786372900007

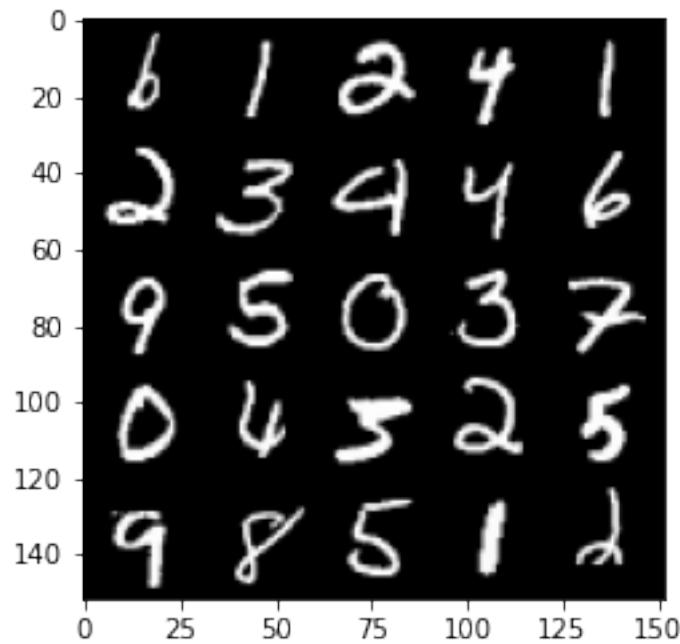




```
100% | 469/469 [00:13<00:00, 34.58it/s]
70% | 327/469 [00:09<00:03, 36.20it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

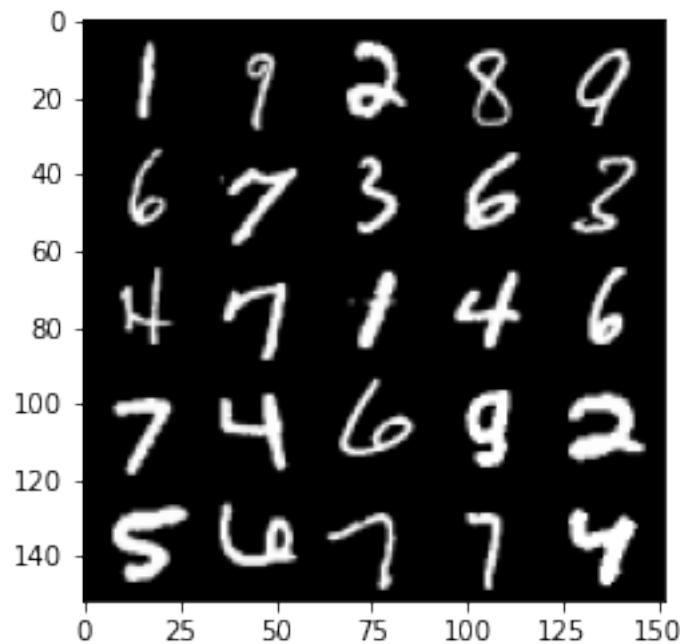
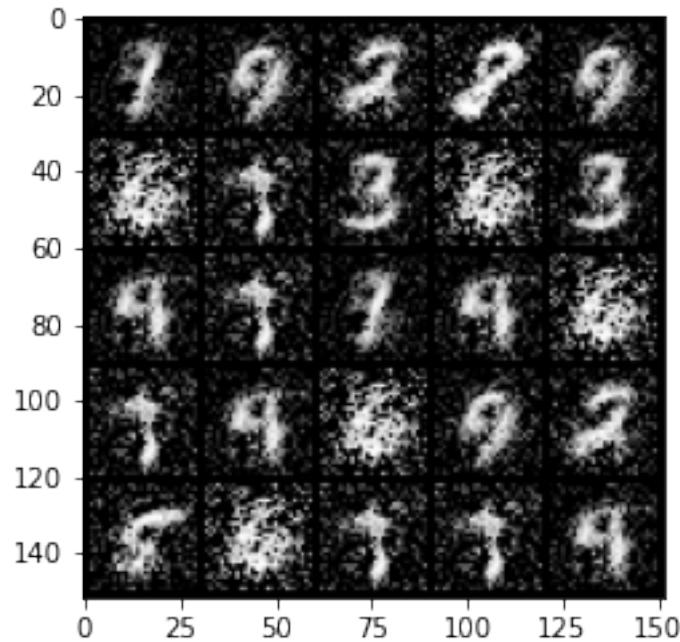
Epoch 317, step 149000 -> generator loss: 0.460248290061951, discriminator loss:  
0.6873080158233643





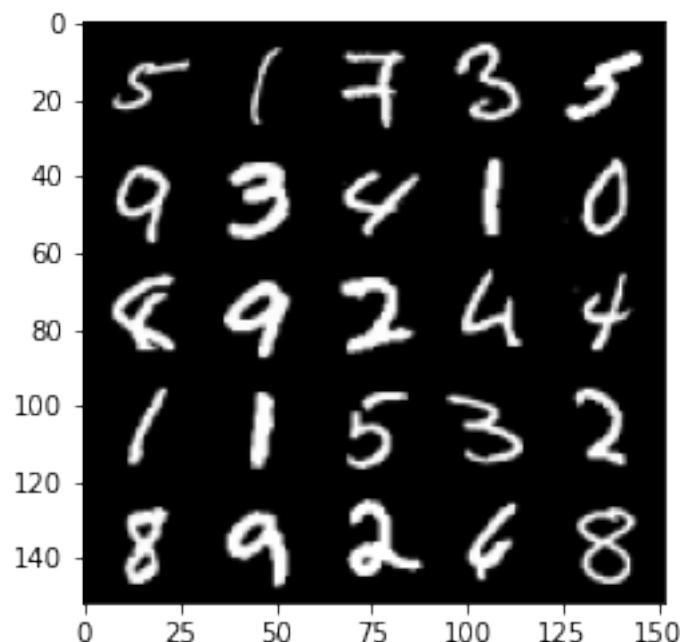
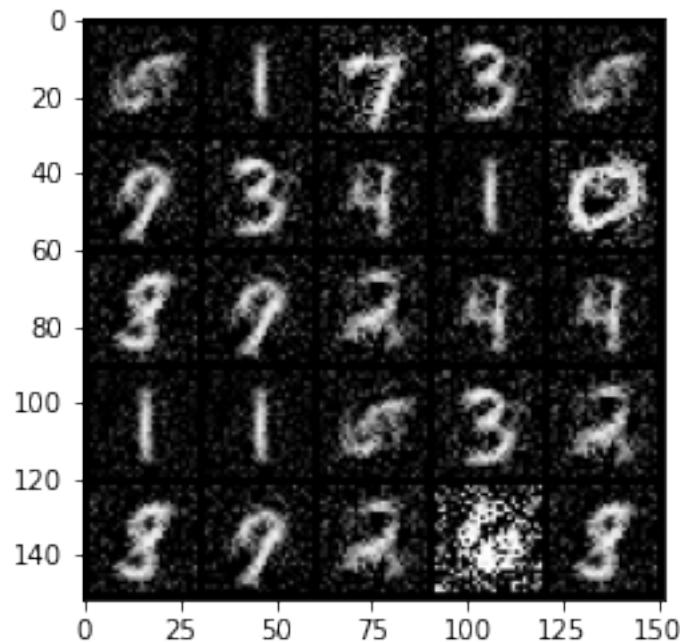
```
100%|     | 469/469 [00:13<00:00, 34.49it/s]
76%|     | 356/469 [00:09<00:03, 35.64it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 318, step 149500 -> generator loss: 0.46309346830844855, discriminator
loss: 0.6818878130912783
```



```
100%|     | 469/469 [00:13<00:00, 34.57it/s]
82%|     | 386/469 [00:10<00:02, 35.06it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

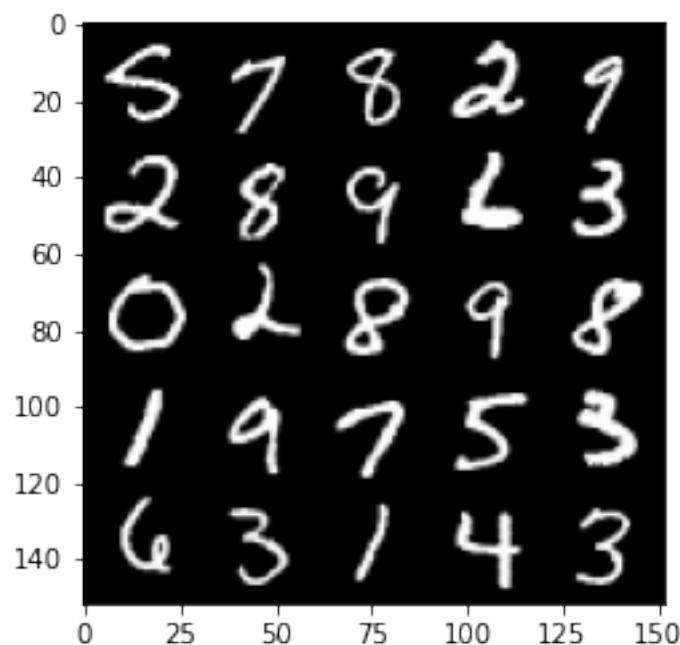
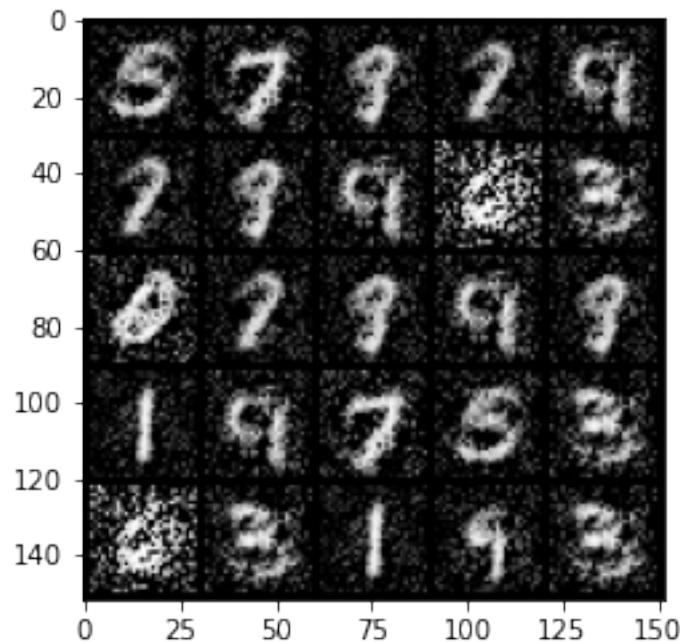
Epoch 319, step 150000 -> generator loss: 0.47071730530262007, discriminator loss: 0.6688656511306766



100% | 469/469 [00:13<00:00, 34.35it/s]

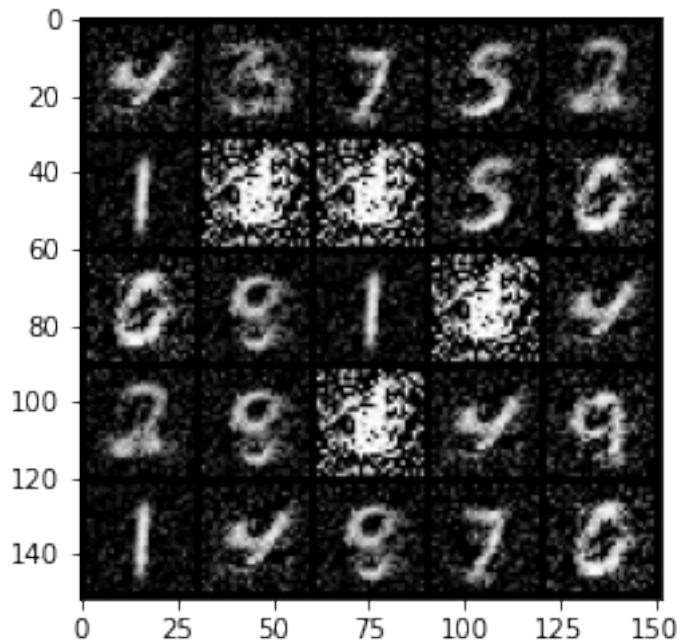
90%| 420/469 [00:12<00:01, 34.91it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

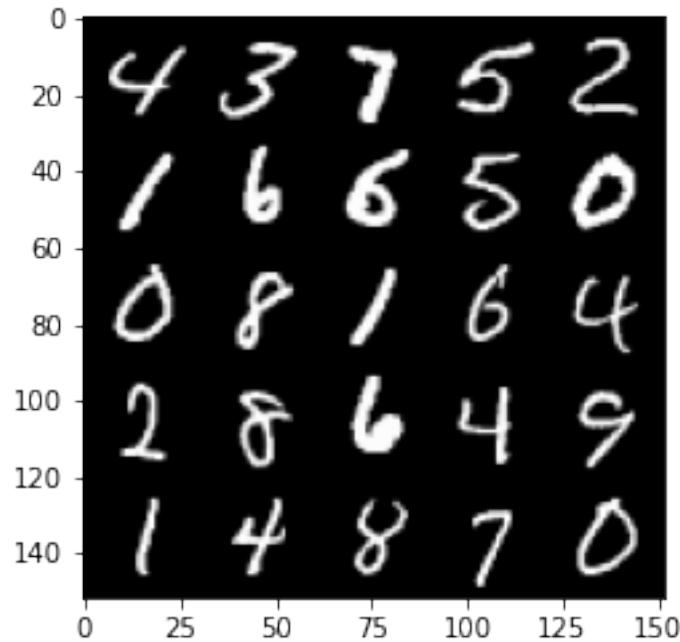
Epoch 320, step 150500 -> generator loss: 0.4621698495745658, discriminator loss: 0.691178263425827



```
100%|     | 469/469 [00:14<00:00, 32.83it/s]
96%|     | 451/469 [00:13<00:00, 35.35it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

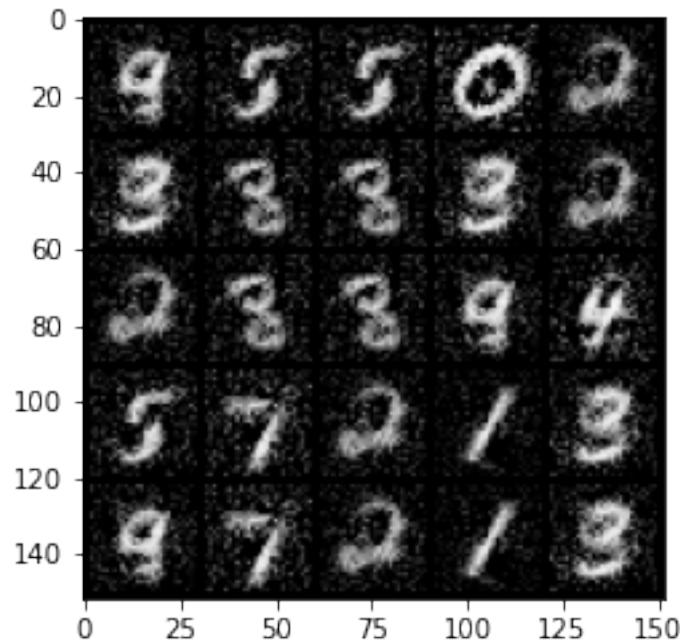
```
Epoch 321, step 151000 -> generator loss: 0.46808843743801126, discriminator
loss: 0.6637083861827853
```

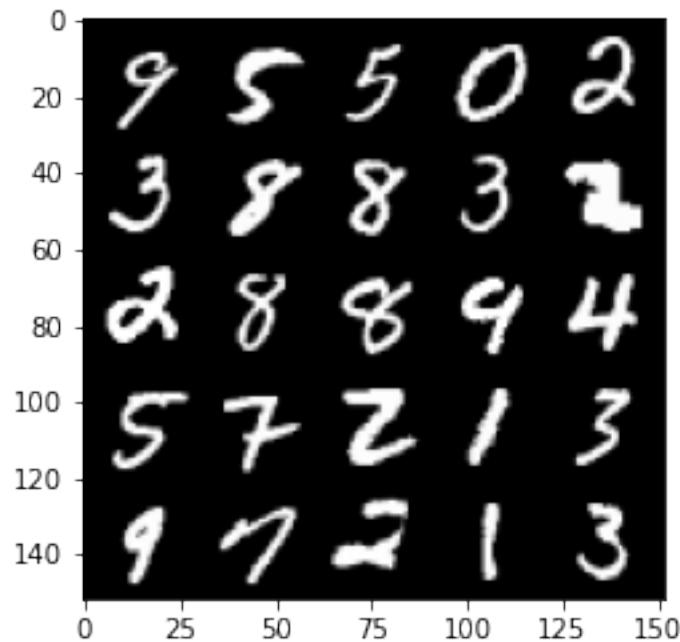




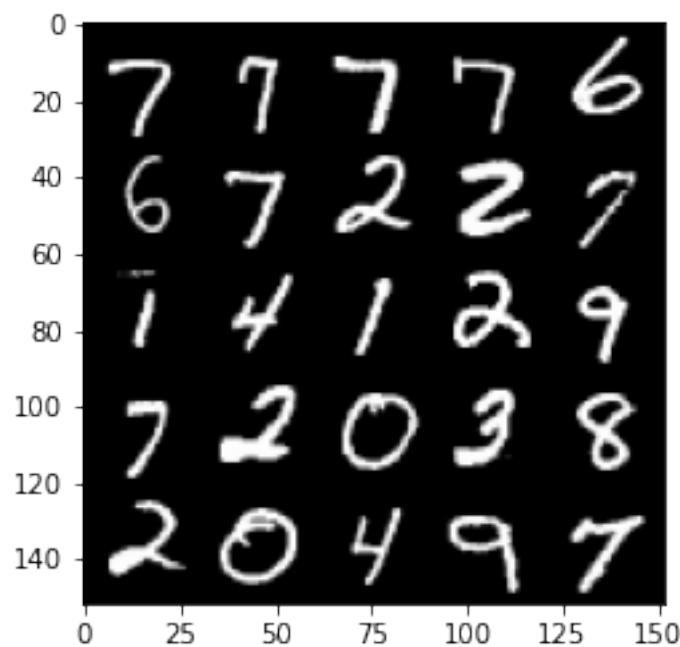
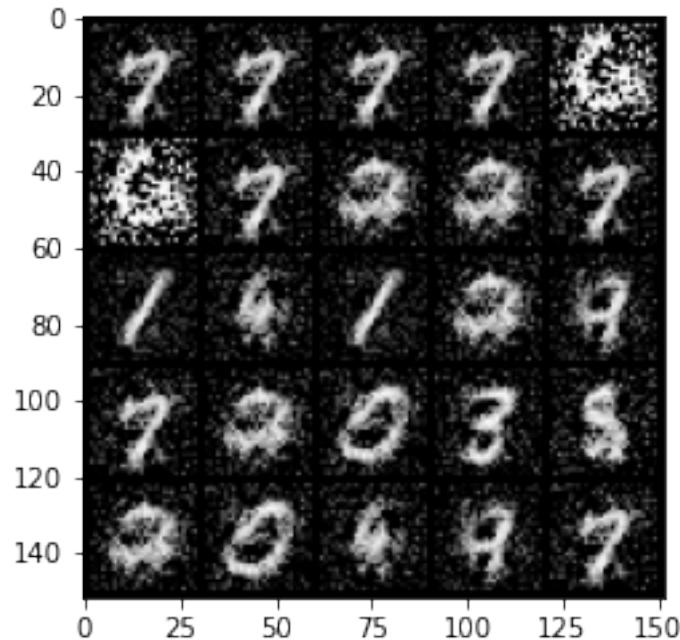
```
100%|   | 469/469 [00:14<00:00, 33.01it/s]
100%|   | 469/469 [00:13<00:00, 35.60it/s]
  2%|   | 11/469 [00:00<00:13, 33.21it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 323, step 151500 -> generator loss: 0.4557110279202461, discriminator
loss: 0.6933200652599332
```





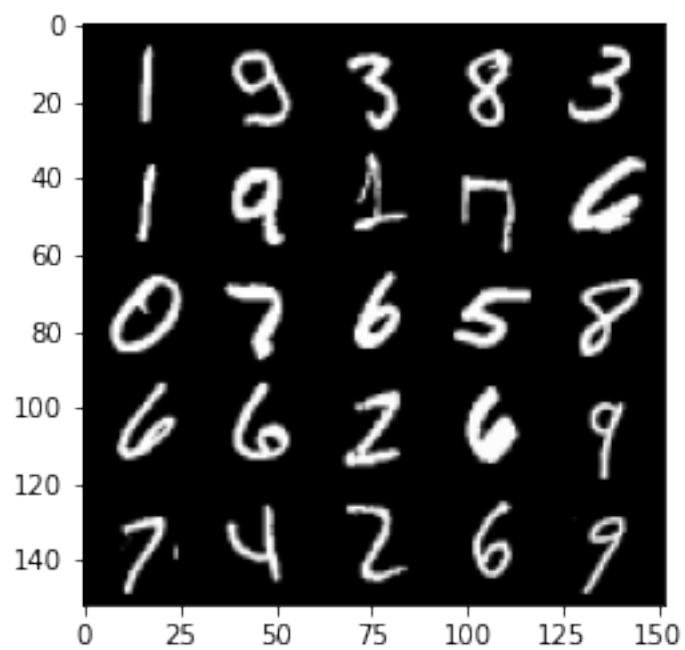
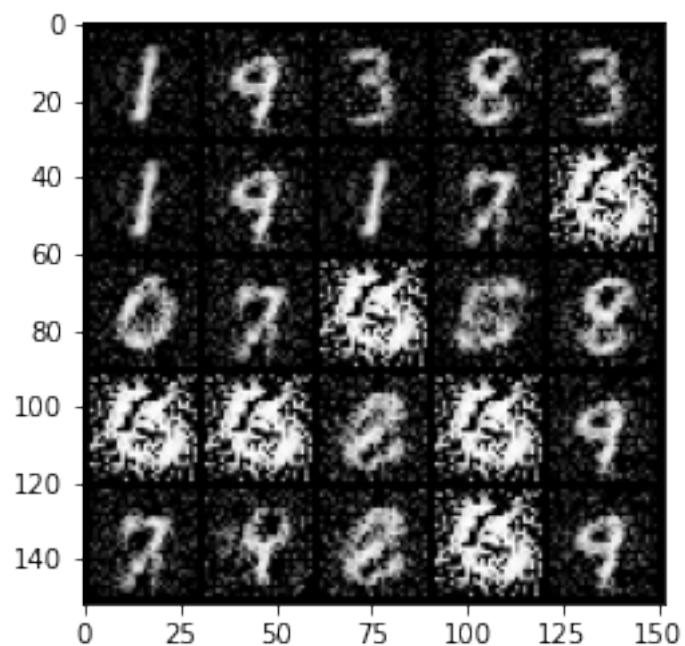
```
100%| 469/469 [00:13<00:00, 34.45it/s]
 9%| 43/469 [00:01<00:11, 35.93it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 324, step 152000 -> generator loss: 0.4698440703749655, discriminator
loss: 0.6726282613277436
```



100% | 469/469 [00:13<00:00, 33.94it/s]  
15% | 72/469 [00:02<00:11, 36.00it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 325, step 152500 -> generator loss: 0.4701762489676475, discriminator

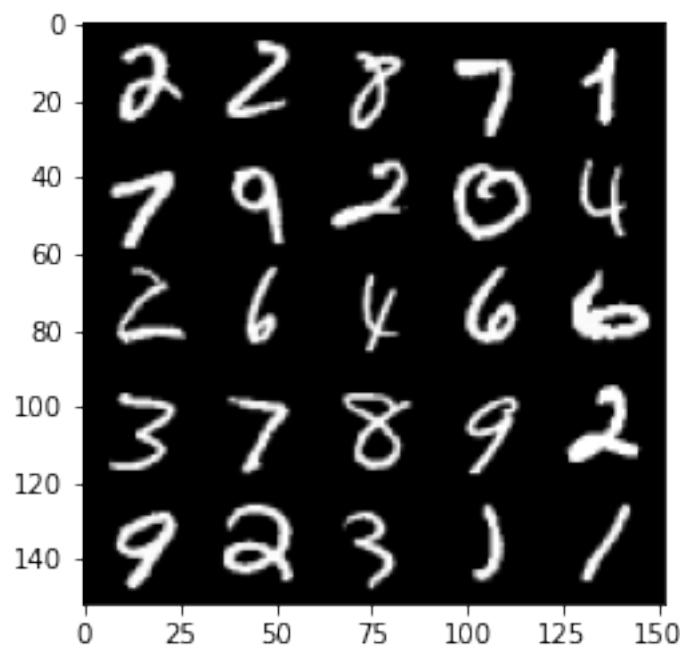
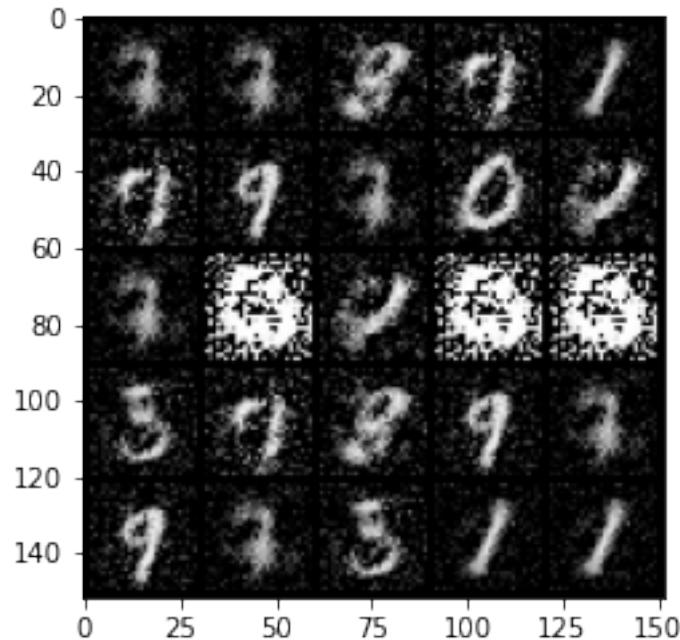
loss: 0.6634014395475395



100% | 469/469 [00:13<00:00, 34.50it/s]  
23% | 106/469 [00:03<00:10, 36.11it/s] Clipping input data to the

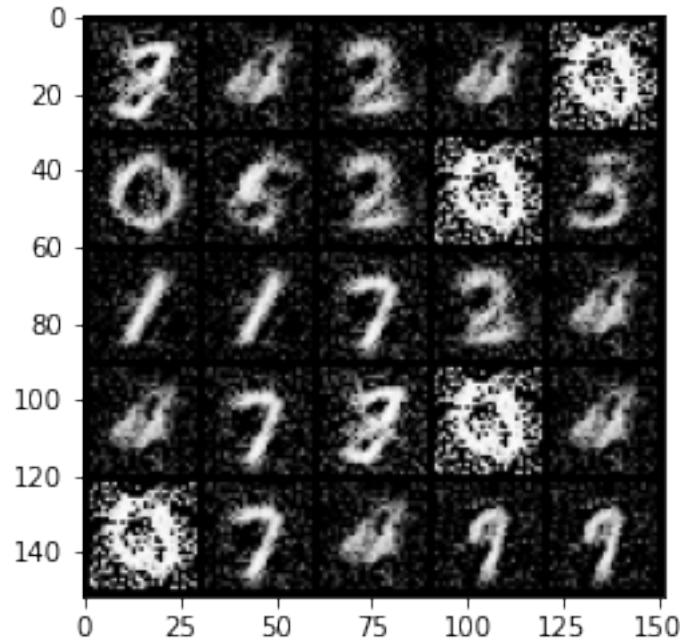
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

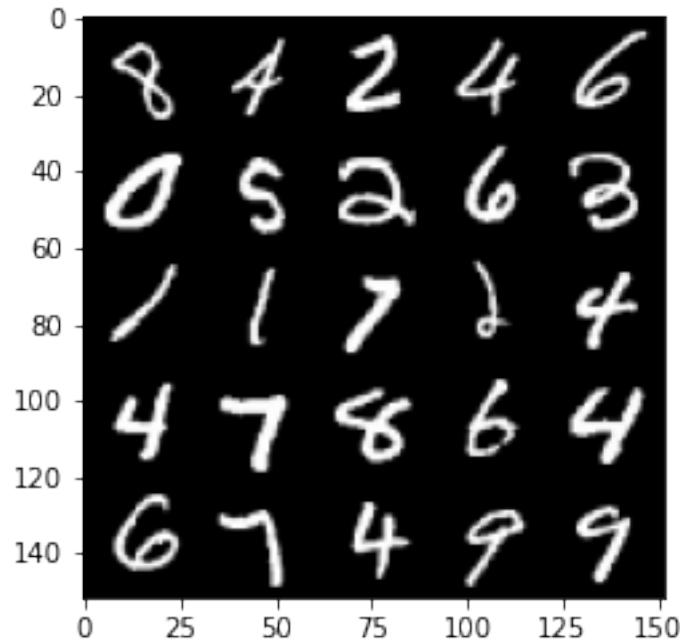
Epoch 326, step 153000 -> generator loss: 0.462488398253918, discriminator loss: 0.6787291529178618



```
100%|      | 469/469 [00:13<00:00, 34.50it/s]
29%|      | 136/469 [00:03<00:09, 35.44it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

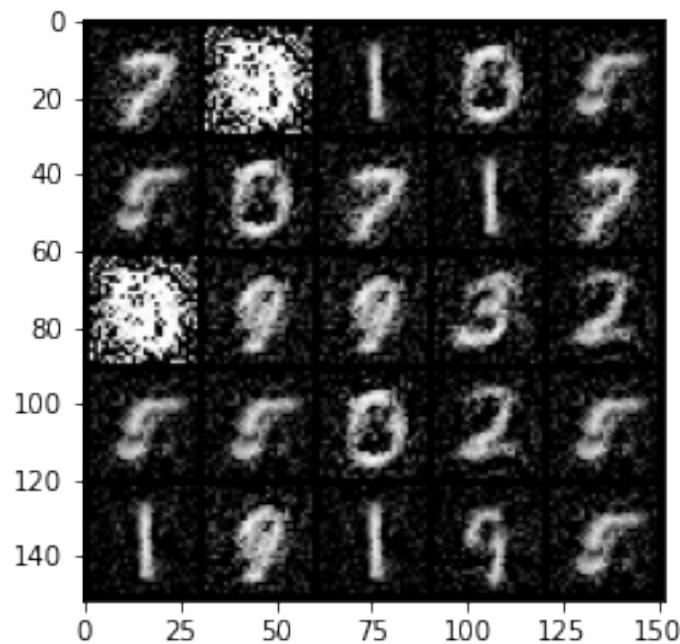
```
Epoch 327, step 153500 -> generator loss: 0.47704097563028347, discriminator
loss: 0.653082743048668
```

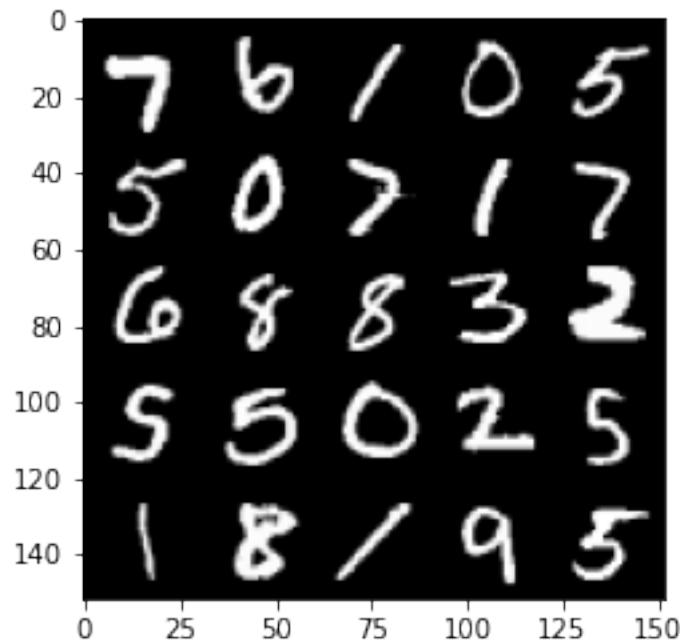




```
100%|      | 469/469 [00:13<00:00, 34.41it/s]
36%|      | 168/469 [00:04<00:08, 34.10it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

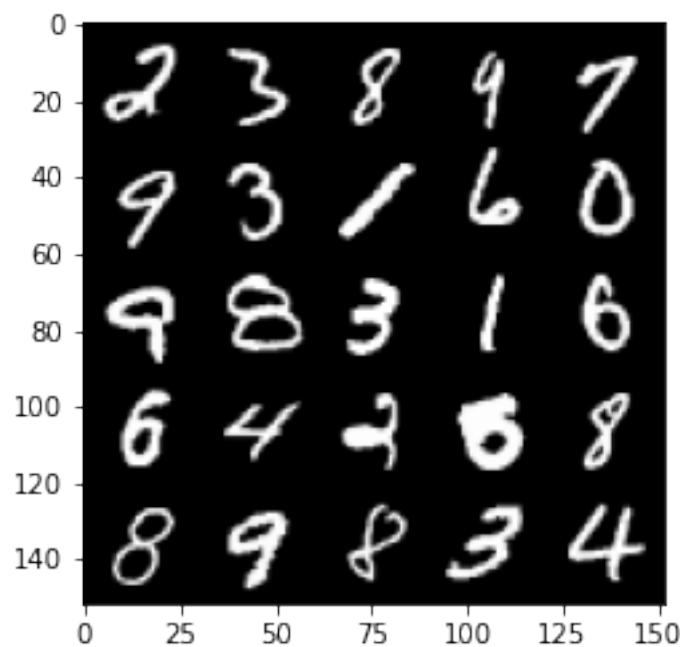
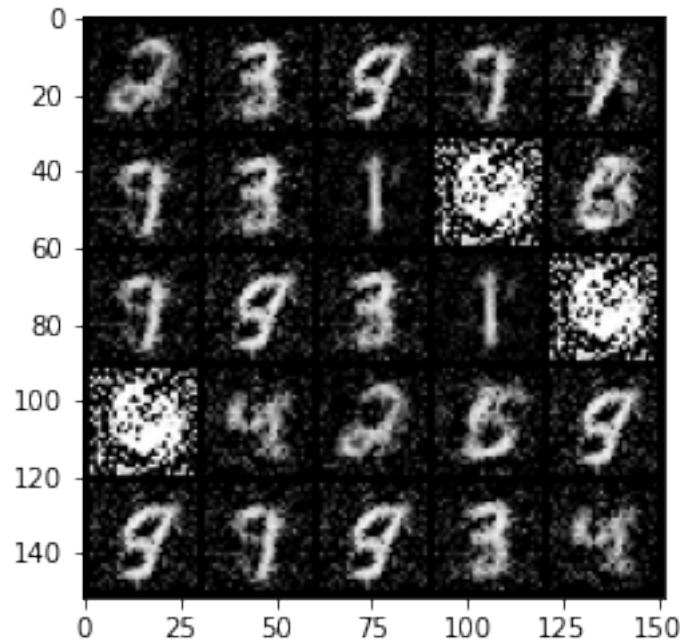
Epoch 328, step 154000 -> generator loss: 0.46767504125833503, discriminator loss: 0.6635602850914001





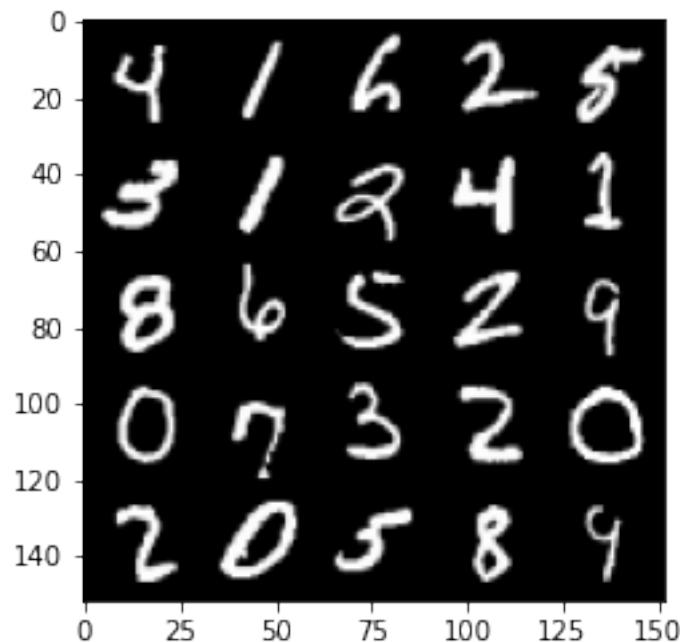
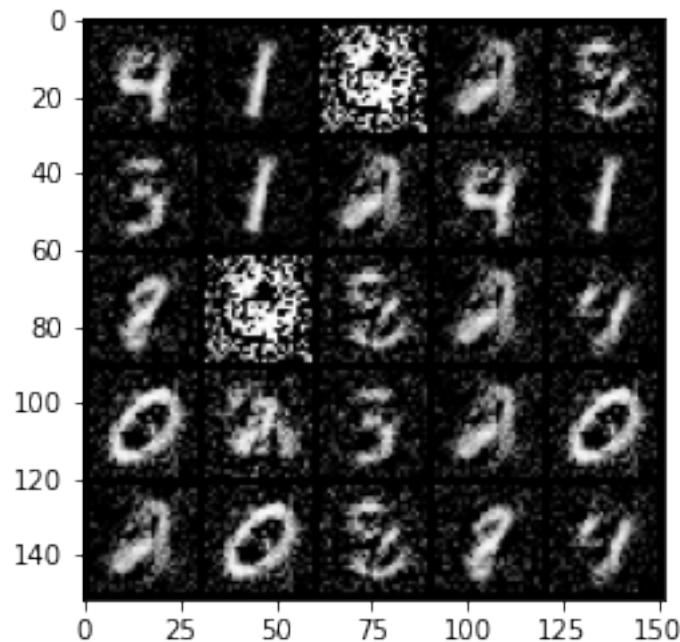
```
100% | 469/469 [00:13<00:00, 34.41it/s]
42% | 199/469 [00:05<00:07, 36.14it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 329, step 154500 -> generator loss: 0.4797916551828383, discriminator
loss: 0.6585437475442887
```



```
100%|      | 469/469 [00:13<00:00, 34.55it/s]
49%|      | 230/469 [00:06<00:06, 34.51it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

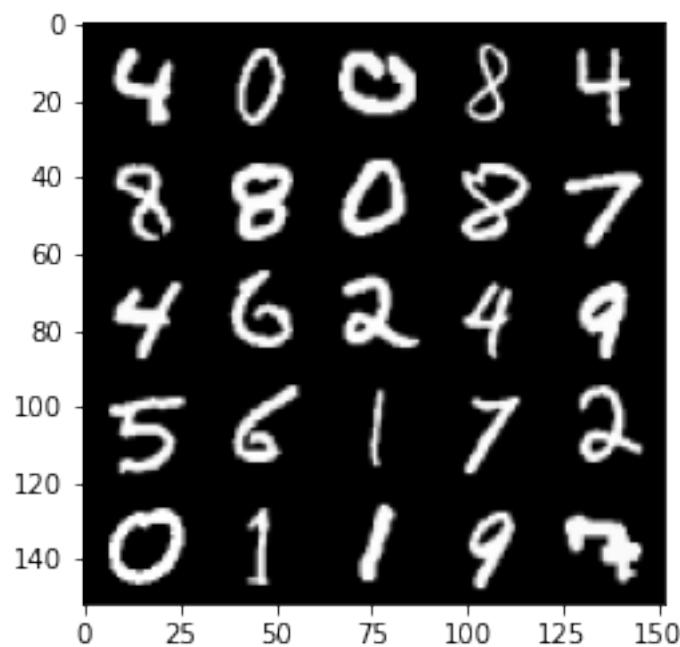
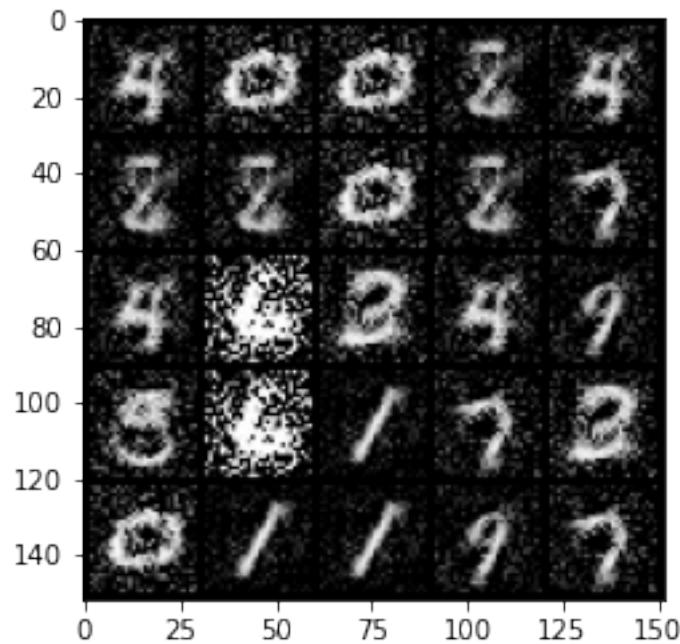
Epoch 330, step 155000 -> generator loss: 0.48391859924793235, discriminator loss: 0.6496378829479218



100% | 469/469 [00:13<00:00, 33.75it/s]

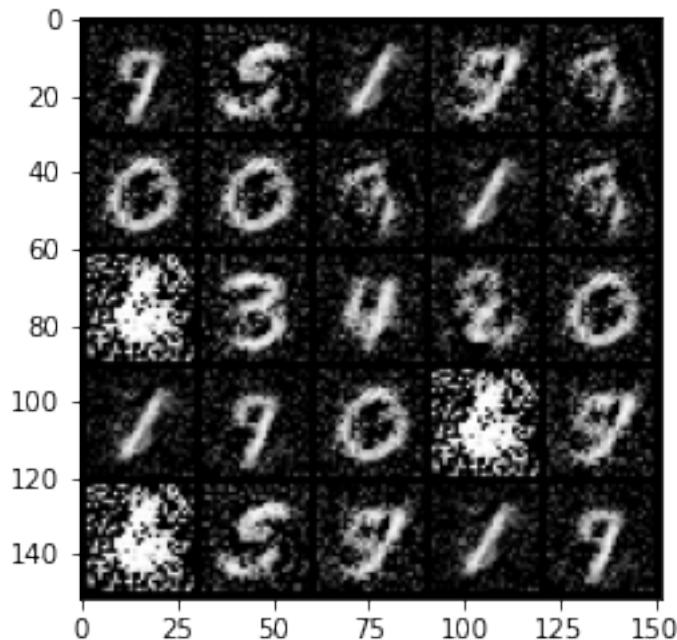
55%| 260/469 [00:07<00:05, 35.87it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

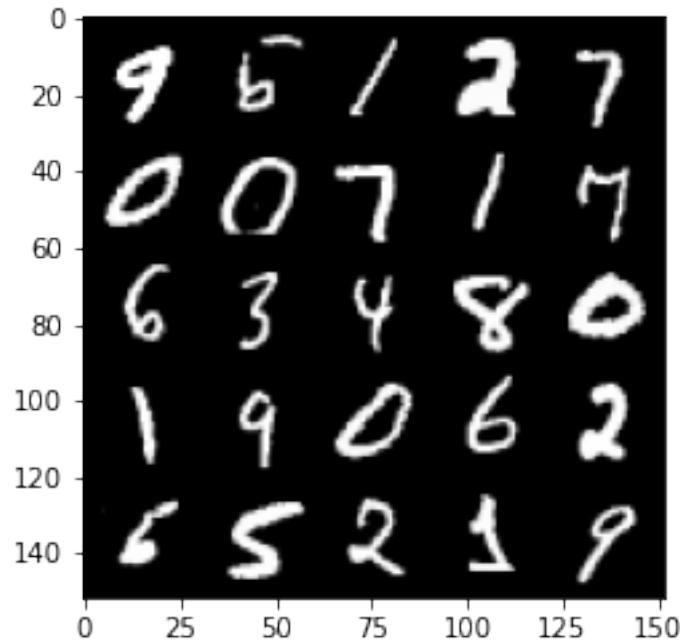
Epoch 331, step 155500 -> generator loss: 0.46487004131078713, discriminator loss: 0.6831130318641656



```
100%|      | 469/469 [00:13<00:00, 34.32it/s]
62%|      | 290/469 [00:08<00:04, 35.96it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

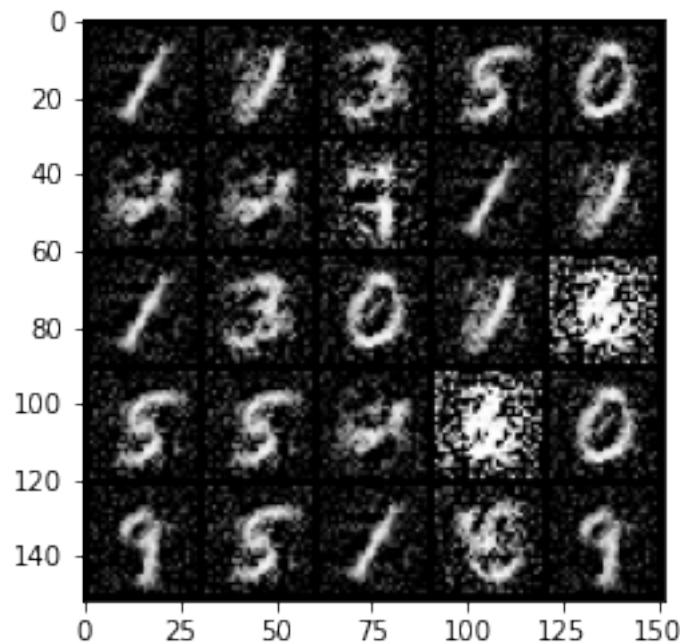
Epoch 332, step 156000 -> generator loss: 0.46480438369512544, discriminator loss: 0.6818279634714126

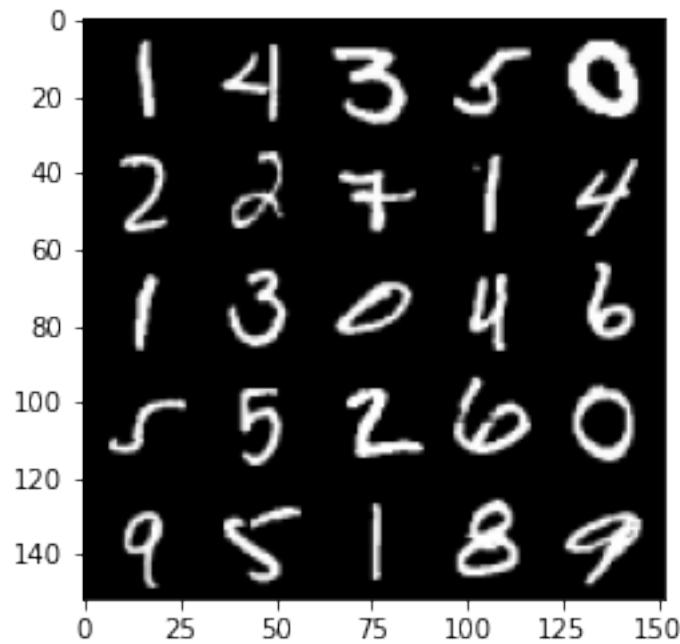




```
100%|      | 469/469 [00:13<00:00, 34.62it/s]
69%|      | 322/469 [00:09<00:04, 35.99it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

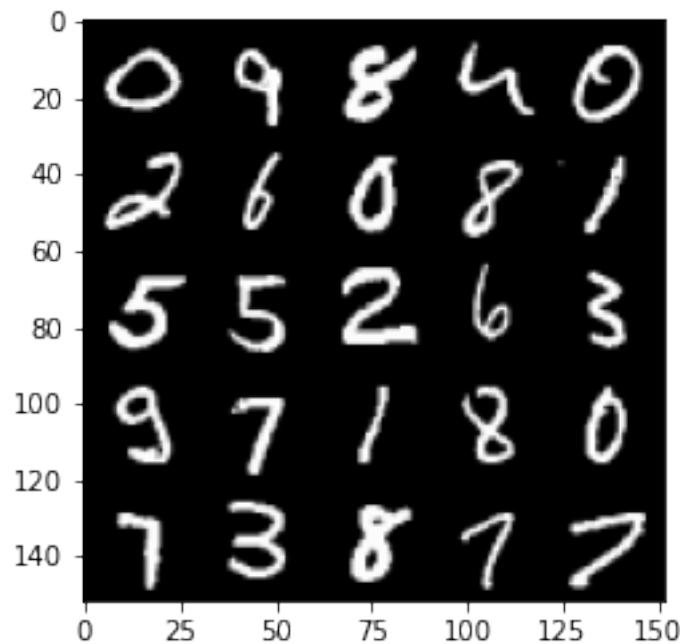
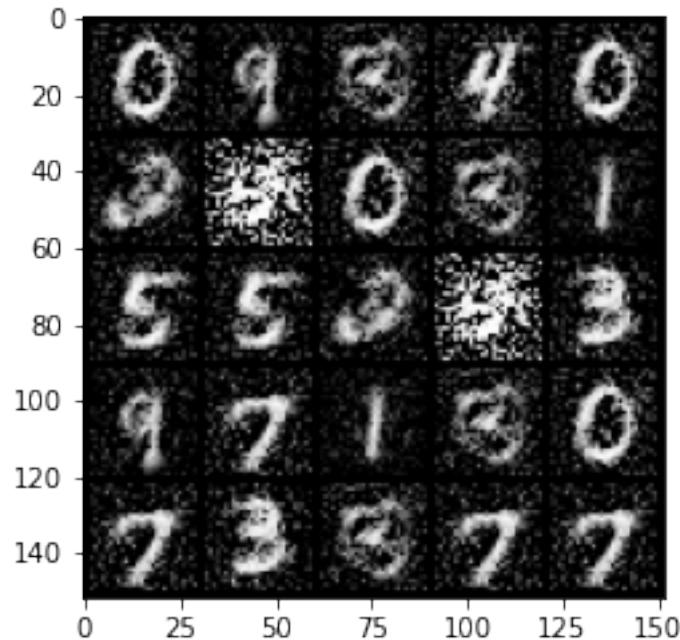
Epoch 333, step 156500 -> generator loss: 0.47718137955665607, discriminator loss: 0.65743841457367





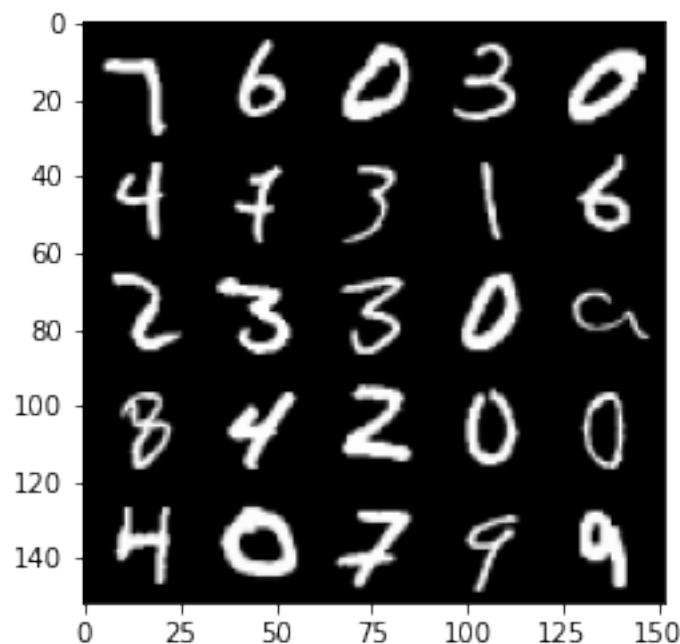
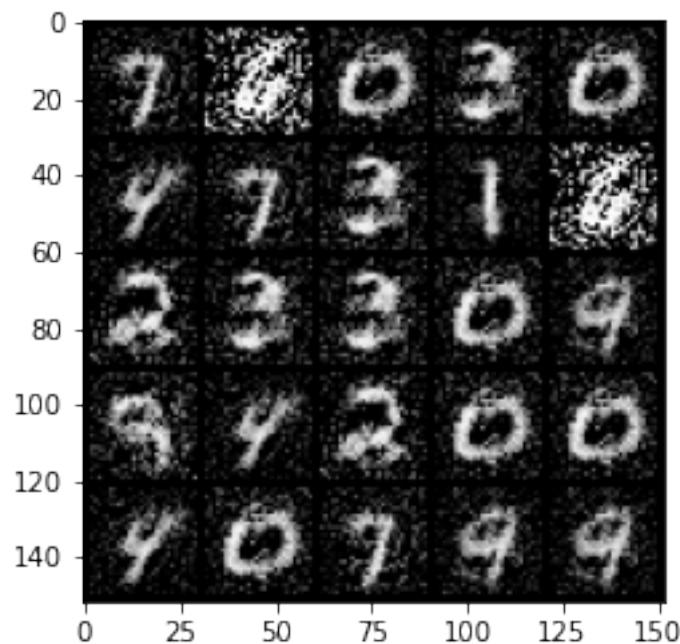
```
100% | 469/469 [00:13<00:00, 34.47it/s]
75% | 351/469 [00:10<00:03, 36.10it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 334, step 157000 -> generator loss: 0.4686097554564476, discriminator
loss: 0.6721363573074335
```



```
100%|      | 469/469 [00:13<00:00, 34.19it/s]
81%|      | 382/469 [00:10<00:02, 36.27it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

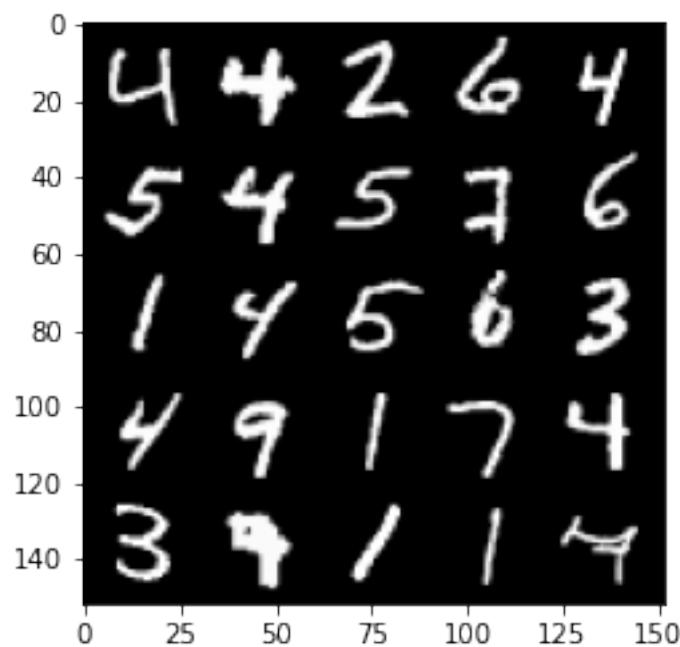
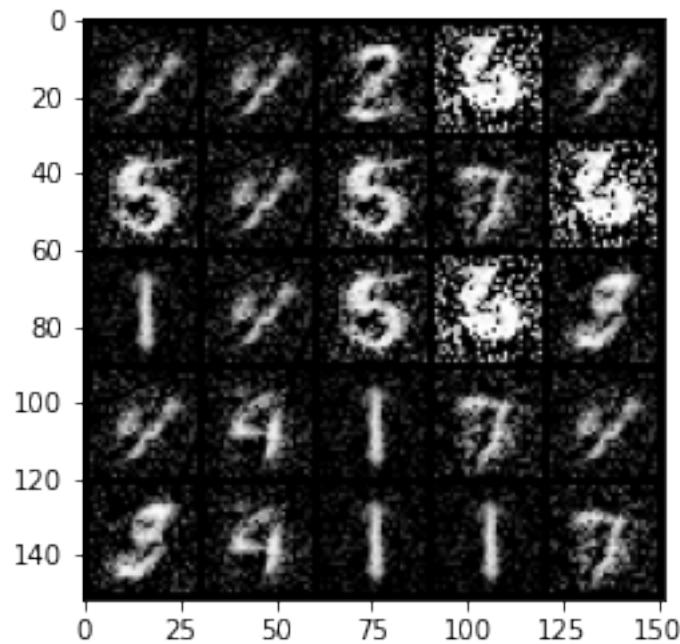
Epoch 335, step 157500 -> generator loss: 0.4770486927628523, discriminator loss: 0.6581377387046816



100% | 469/469 [00:13<00:00, 33.89it/s]

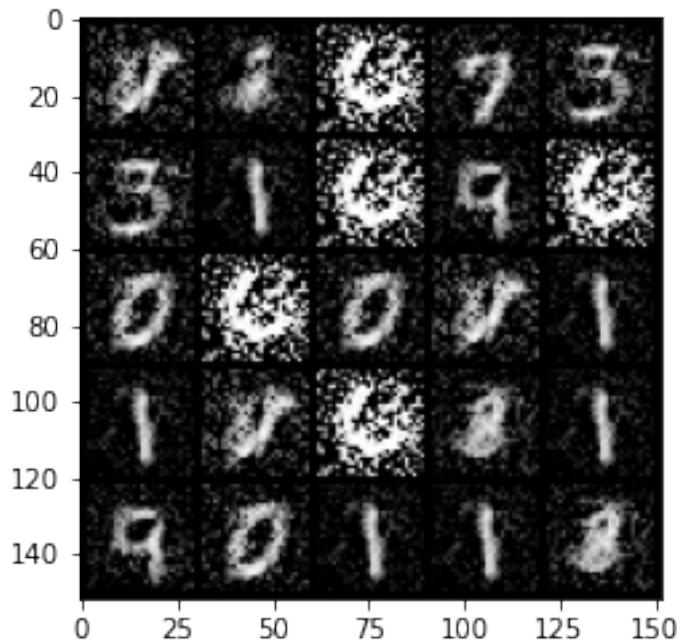
89%| 416/469 [00:11<00:01, 36.39it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

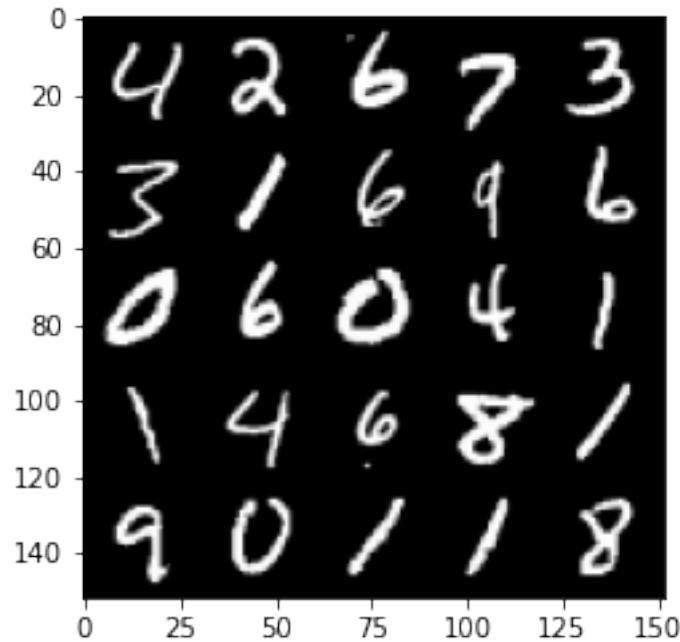
Epoch 336, step 158000 -> generator loss: 0.4764896619319916, discriminator loss: 0.6625342423915862



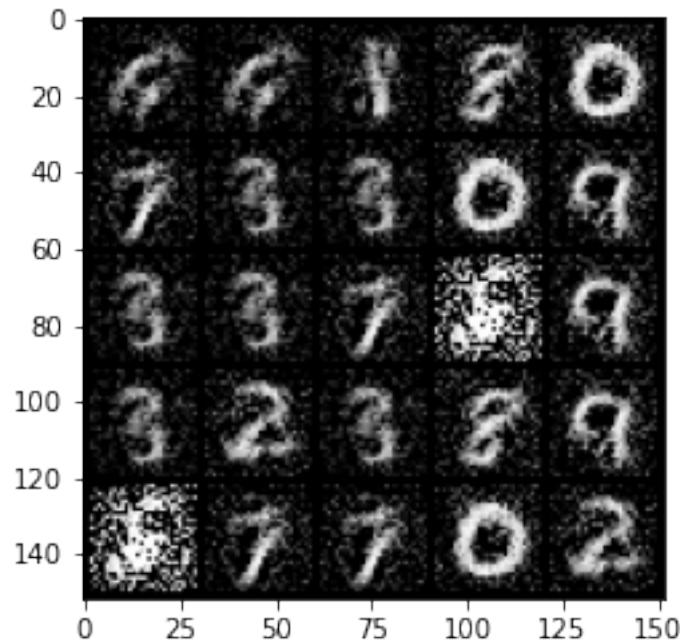
```
100%|   | 469/469 [00:13<00:00, 34.53it/s]
95%|   | 444/469 [00:12<00:00, 36.07it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

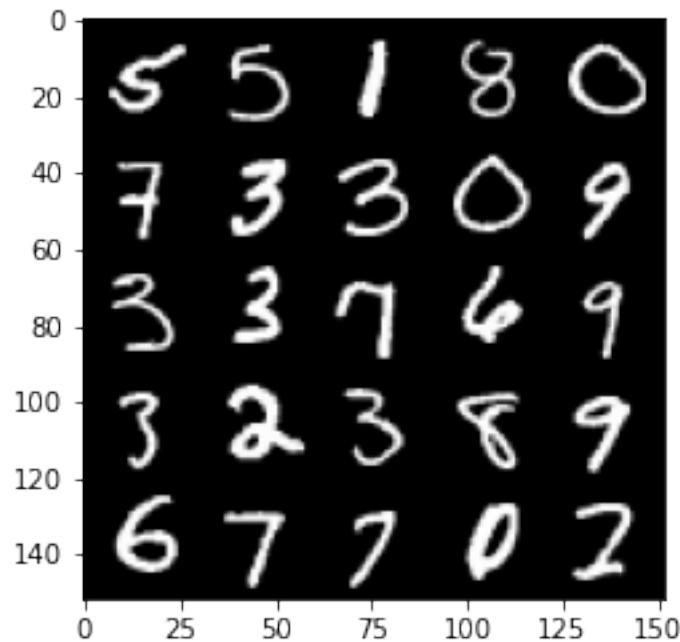
```
Epoch 337, step 158500 -> generator loss: 0.47082363951206235, discriminator
loss: 0.6705102179050444
```



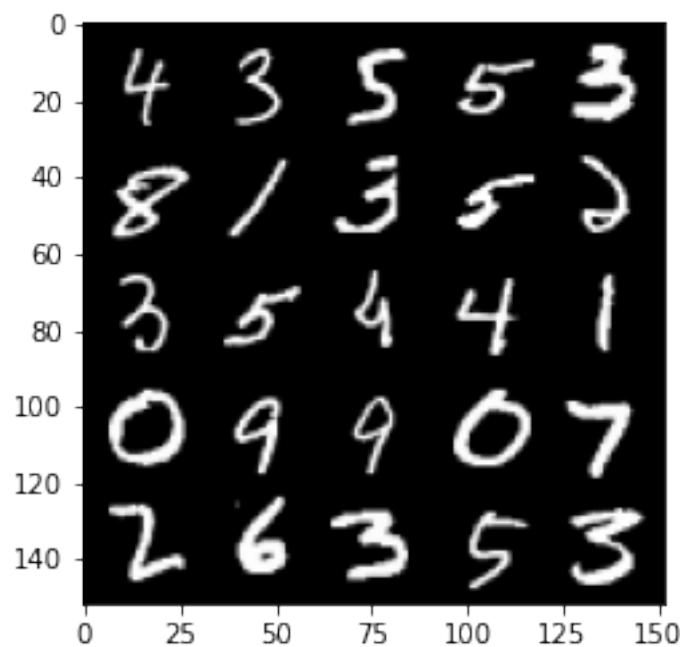
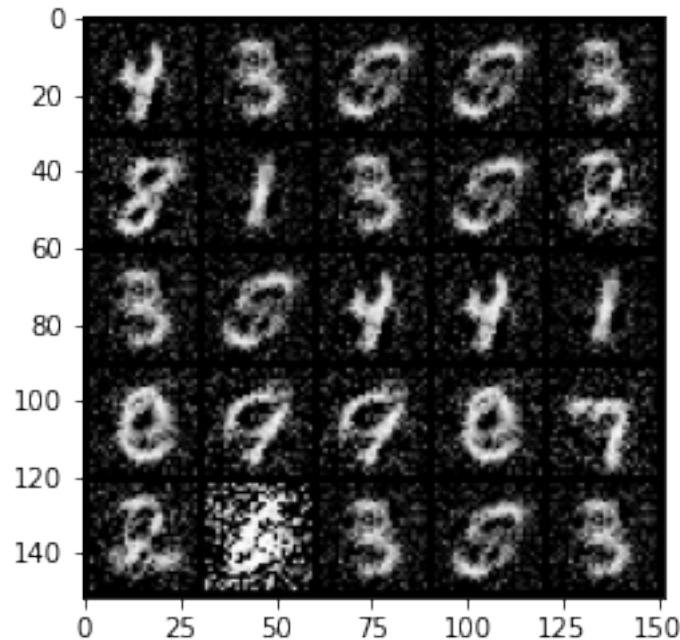


```
100%| 469/469 [00:13<00:00, 34.47it/s]
100%| 469/469 [00:13<00:00, 35.50it/s]
 1%| 7/469 [00:00<00:15, 30.55it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 339, step 159000 -> generator loss: 0.4757813020944593, discriminator
loss: 0.6581612216234206
```





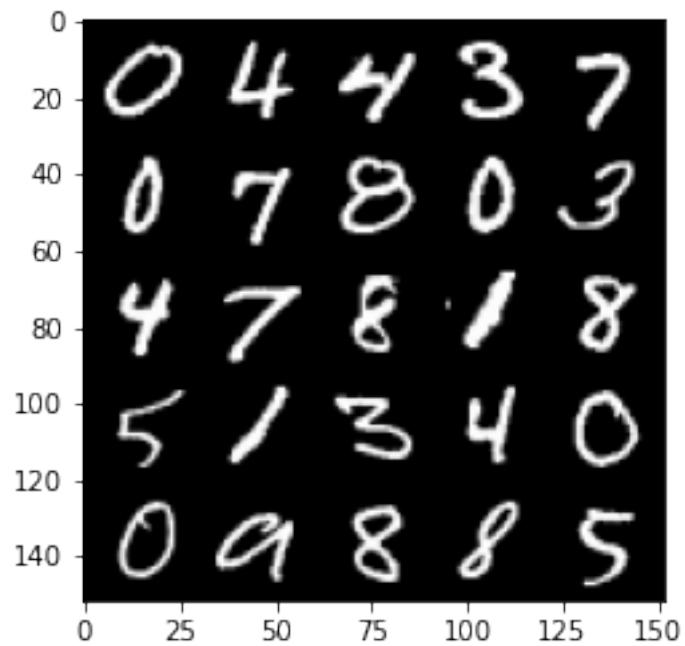
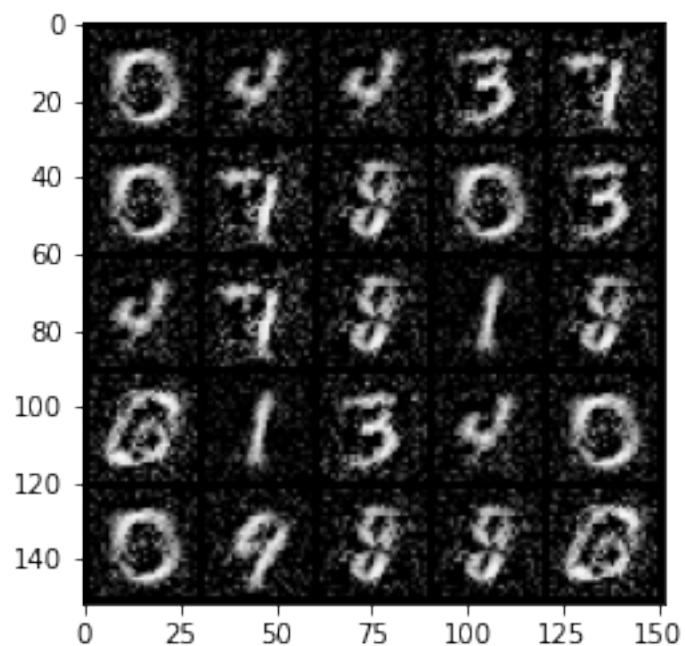
```
100%| 469/469 [00:13<00:00, 34.63it/s]
 9%| 40/469 [00:01<00:12, 34.19it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 340, step 159500 -> generator loss: 0.47577798873186106, discriminator
loss: 0.6667151827812199
```



```
100%| 469/469 [00:13<00:00, 34.36it/s]
15%| 70/469 [00:01<00:10, 36.56it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 341, step 160000 -> generator loss: 0.4614597786664959, discriminator

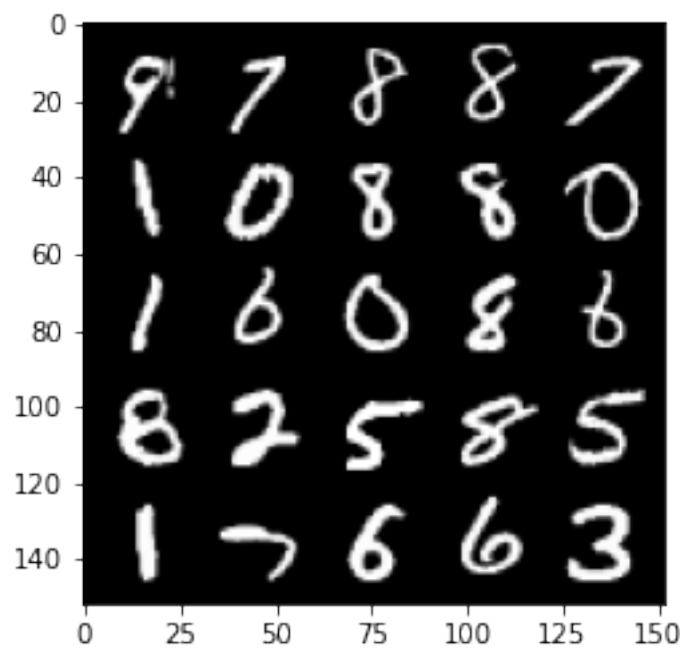
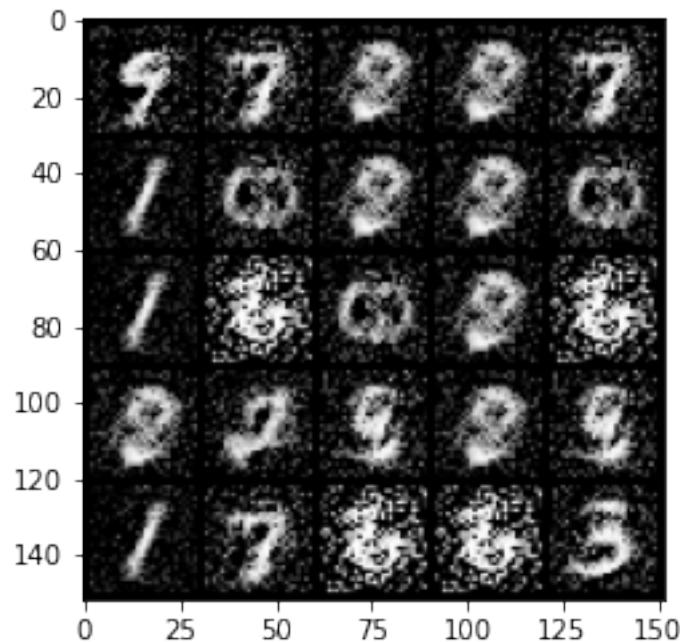
loss: 0.6882200809717173



100% | 469/469 [00:13<00:00, 34.41it/s]  
22% | 102/469 [00:02<00:10, 35.79it/s] Clipping input data to the

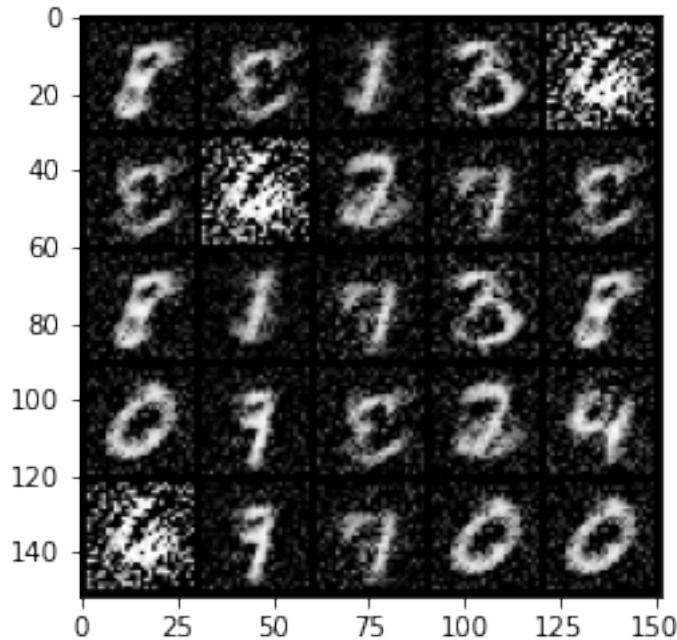
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

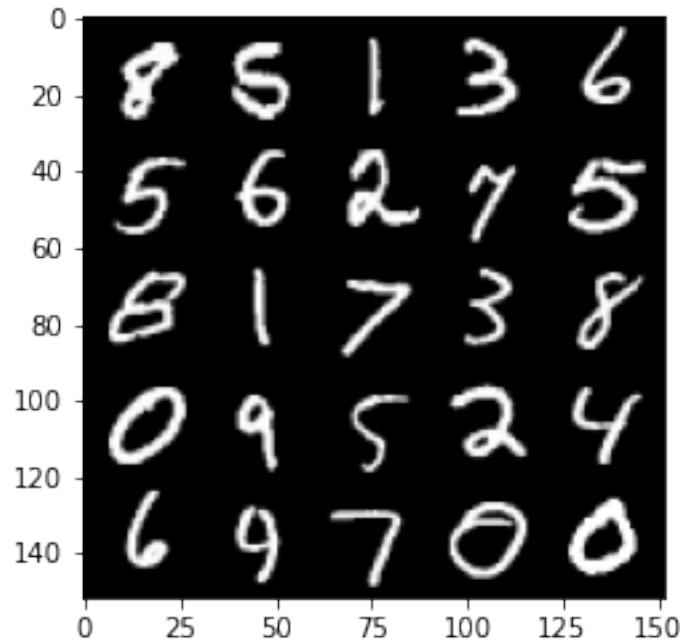
Epoch 342, step 160500 -> generator loss: 0.4702228929996492, discriminator loss: 0.6681520948410026



```
100%|    | 469/469 [00:13<00:00, 34.02it/s]
28%|    | 130/469 [00:03<00:09, 36.26it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

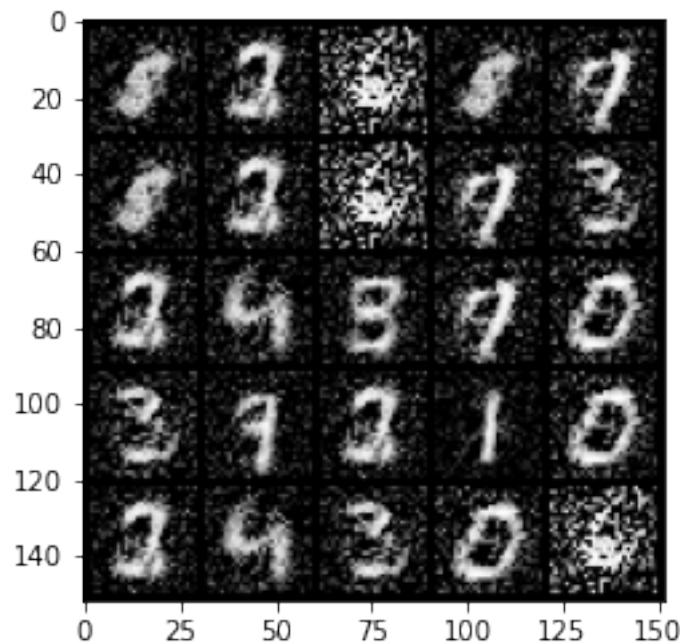
Epoch 343, step 161000 -> generator loss: 0.4633333725929256, discriminator  
loss: 0.6882936147451408

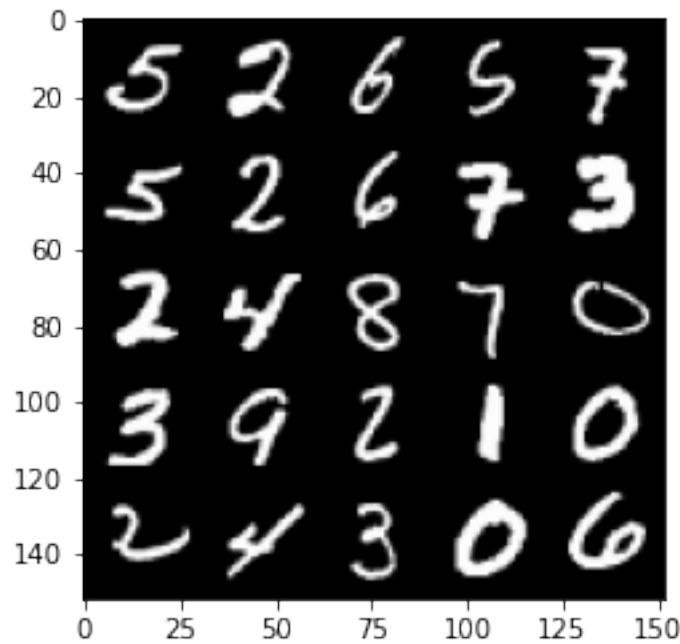




```
100%|      | 469/469 [00:13<00:00, 34.46it/s]
35%|      | 164/469 [00:04<00:08, 34.54it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

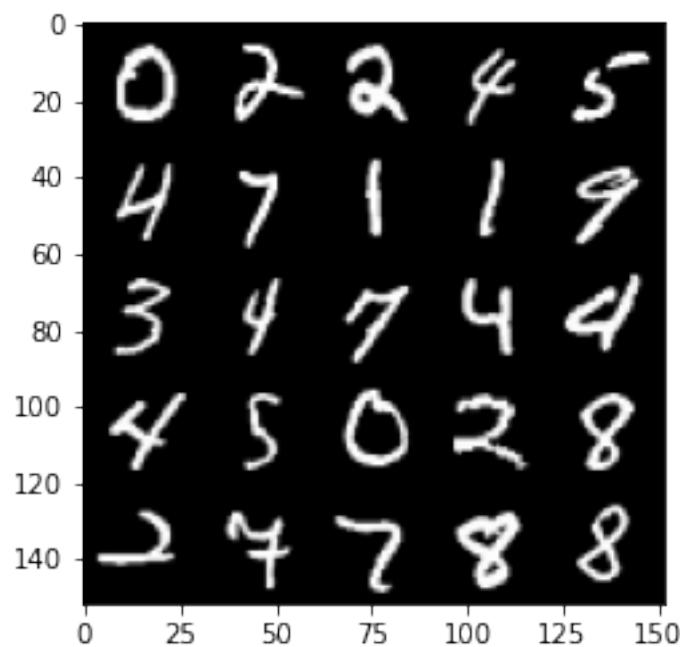
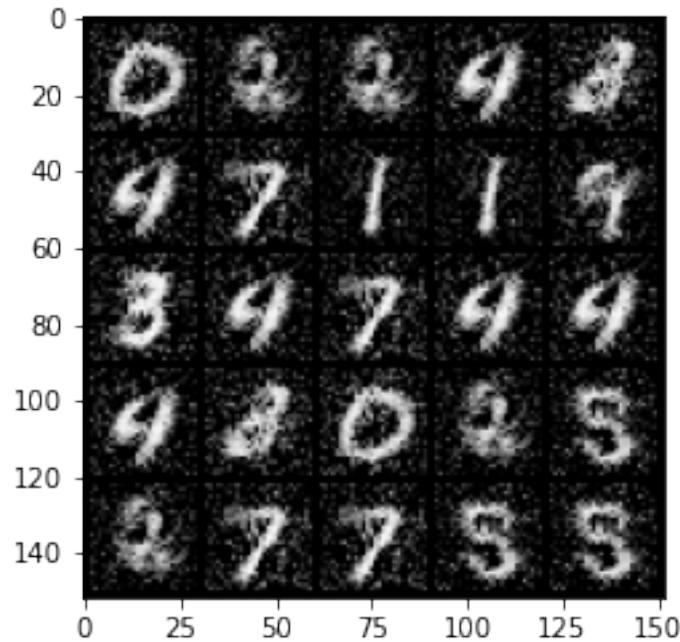
```
Epoch 344, step 161500 -> generator loss: 0.4548993341326713, discriminator
loss: 0.6962601040601726
```





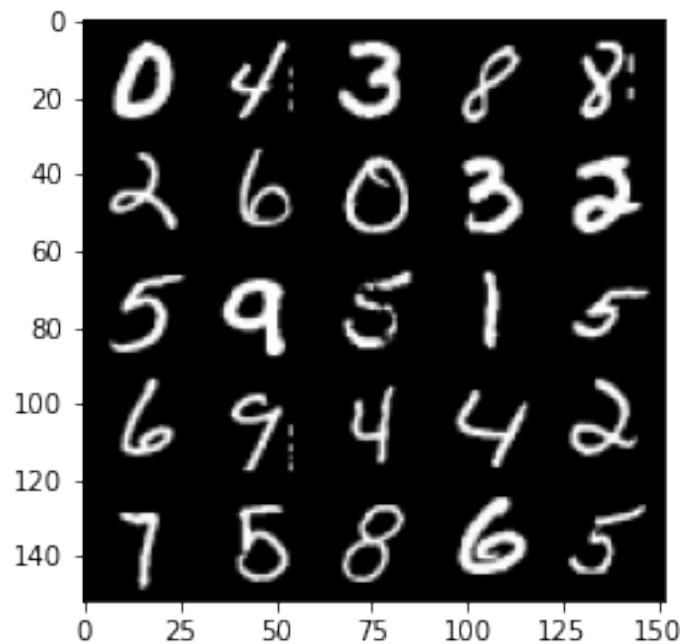
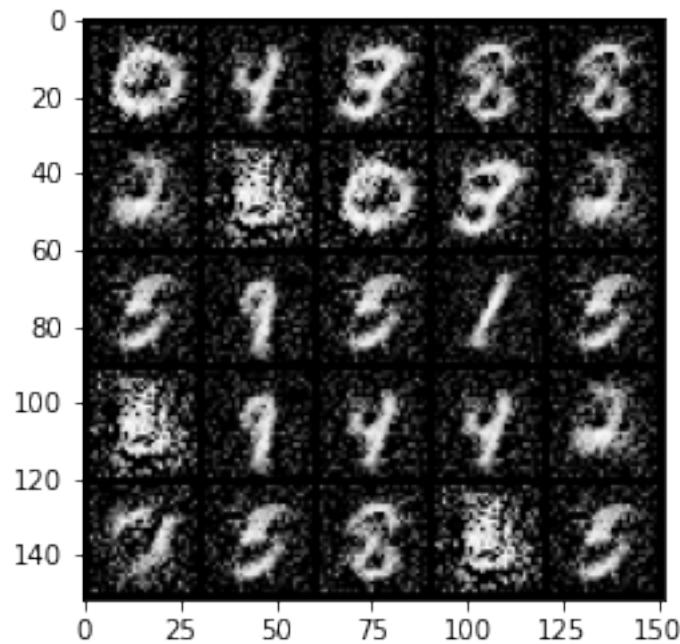
```
100% | 469/469 [00:13<00:00, 34.08it/s]
41% | 194/469 [00:05<00:07, 35.99it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 345, step 162000 -> generator loss: 0.4672455810308459, discriminator
loss: 0.6723027224540715
```



```
100%|      | 469/469 [00:13<00:00, 34.48it/s]
48%|      | 224/469 [00:06<00:06, 36.13it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

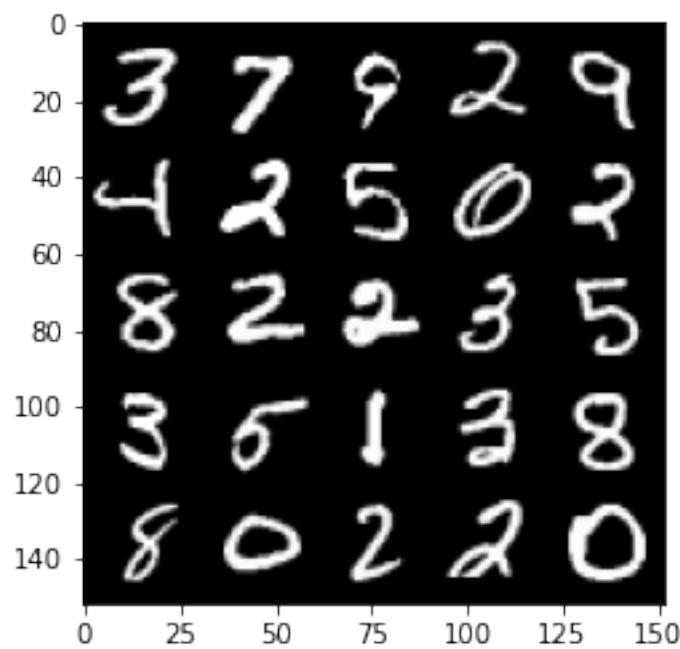
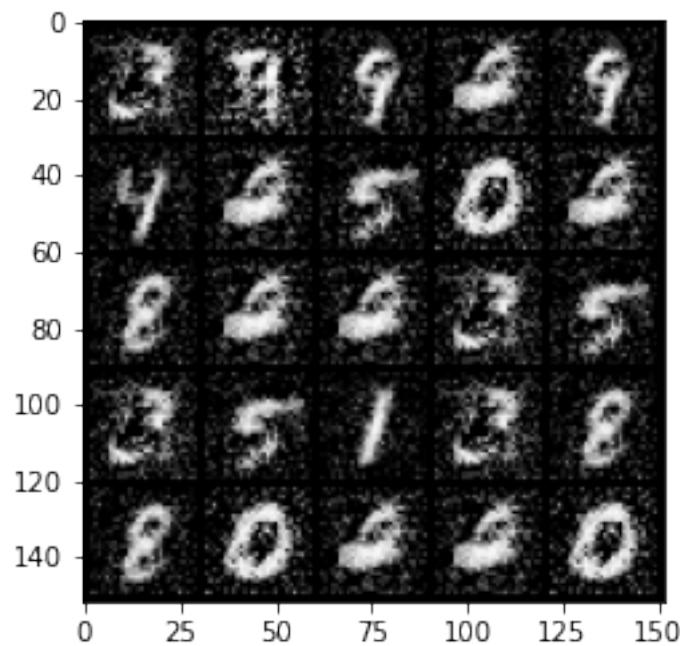
Epoch 346, step 162500 -> generator loss: 0.46349791550636343, discriminator loss: 0.6804656960964203



100% | 469/469 [00:13<00:00, 34.59it/s]

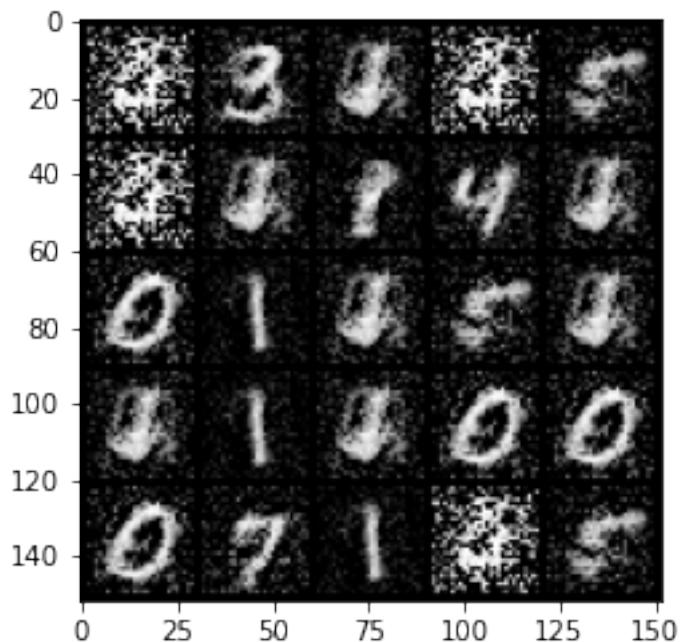
54%| 255/469 [00:07<00:05, 36.43it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

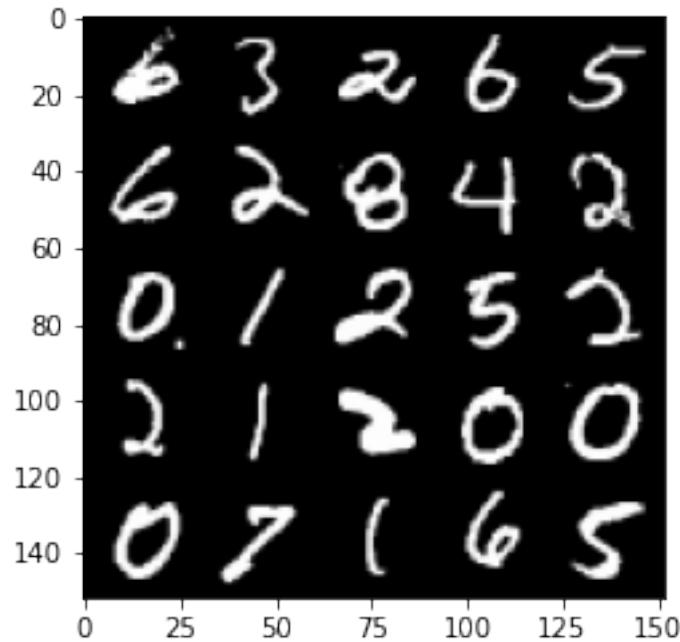
Epoch 347, step 163000 -> generator loss: 0.4706251063942907, discriminator loss: 0.6721255635023117



```
100%|      | 469/469 [00:13<00:00, 34.13it/s]
61%|      | 288/469 [00:08<00:05, 35.94it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

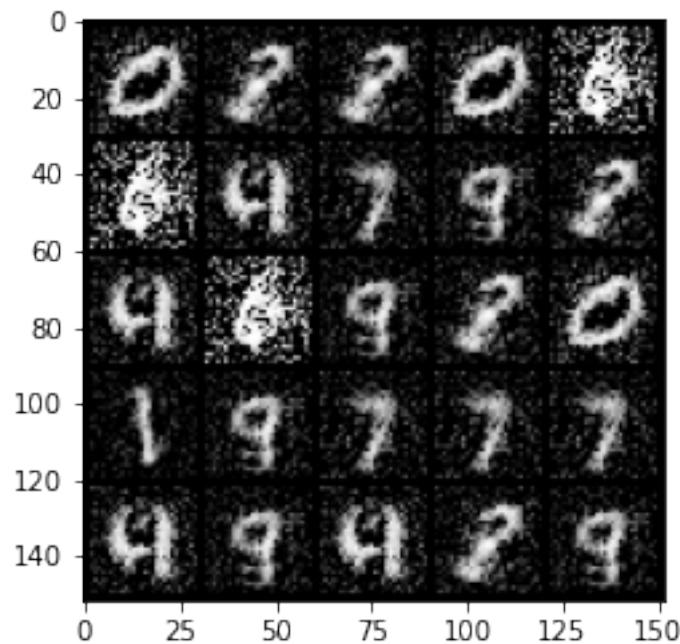
```
Epoch 348, step 163500 -> generator loss: 0.4750782098770146, discriminator
loss: 0.6637294865846631
```

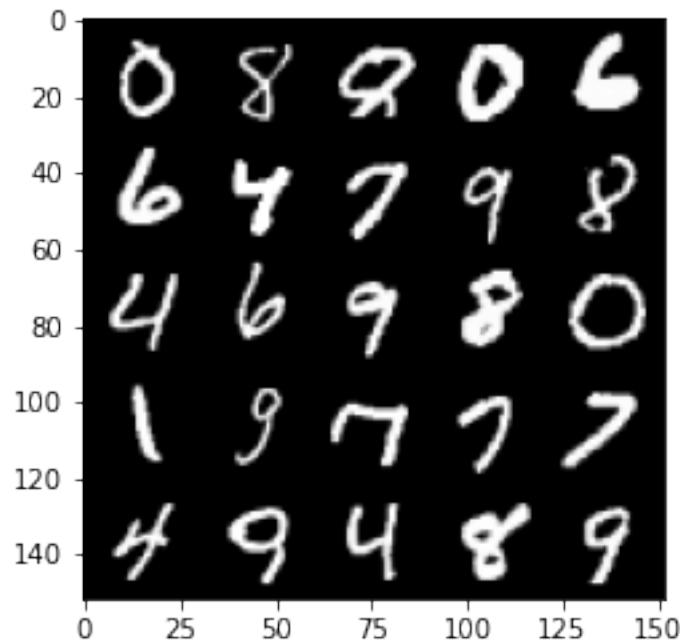




```
100%|      | 469/469 [00:13<00:00, 34.41it/s]
68%|      | 319/469 [00:09<00:04, 36.20it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

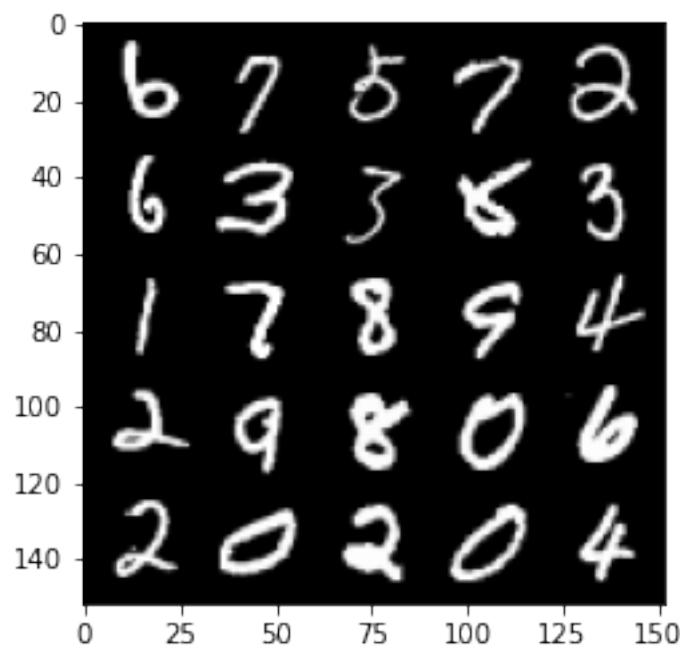
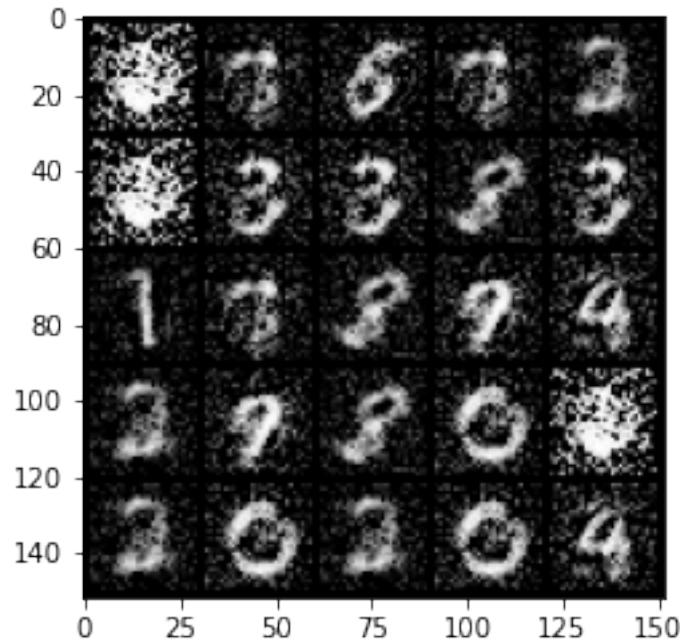
Epoch 349, step 164000 -> generator loss: 0.4646622098088261, discriminator loss: 0.6854135082960134





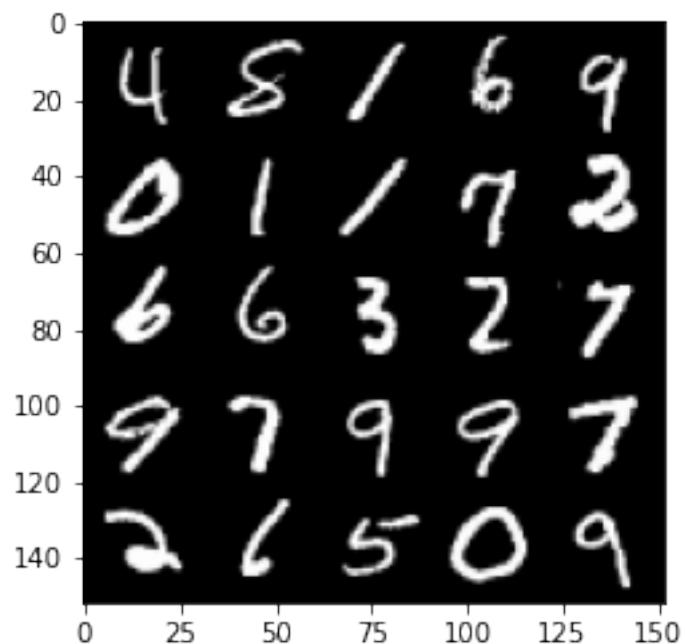
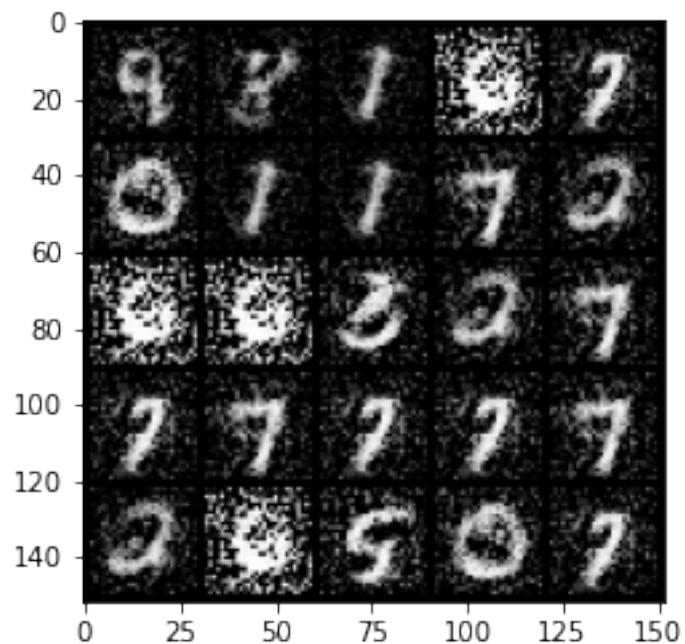
```
100%|      | 469/469 [00:13<00:00, 34.49it/s]
74%|      | 347/469 [00:09<00:03, 35.38it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 350, step 164500 -> generator loss: 0.46874028789997085, discriminator
loss: 0.6779353531599038
```



```
100%|      | 469/469 [00:13<00:00, 34.35it/s]
81%|      | 379/469 [00:10<00:02, 35.28it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

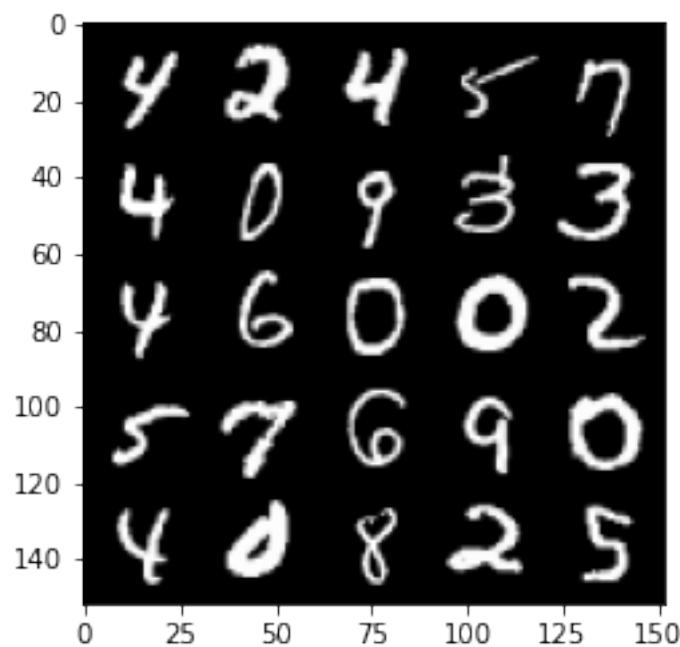
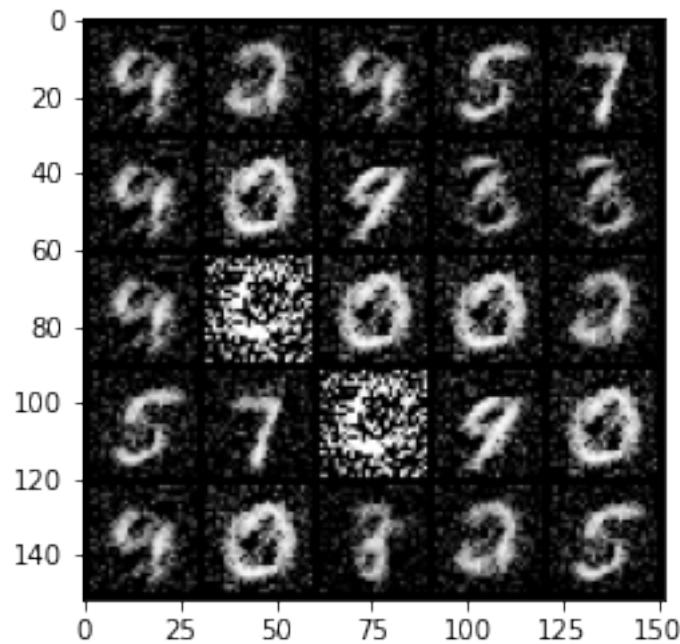
Epoch 351, step 165000 -> generator loss: 0.4739410814046863, discriminator loss: 0.662510061383247



100% | 469/469 [00:13<00:00, 34.49it/s]

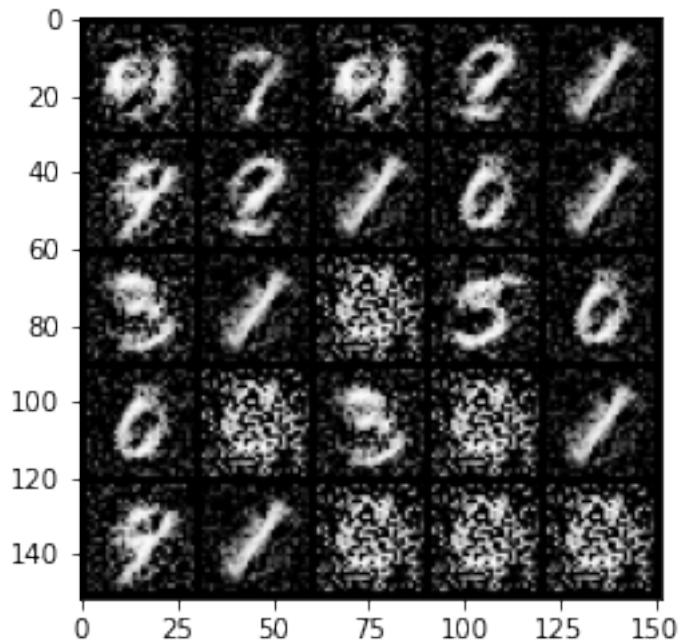
87%| 410/469 [00:11<00:01, 36.25it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

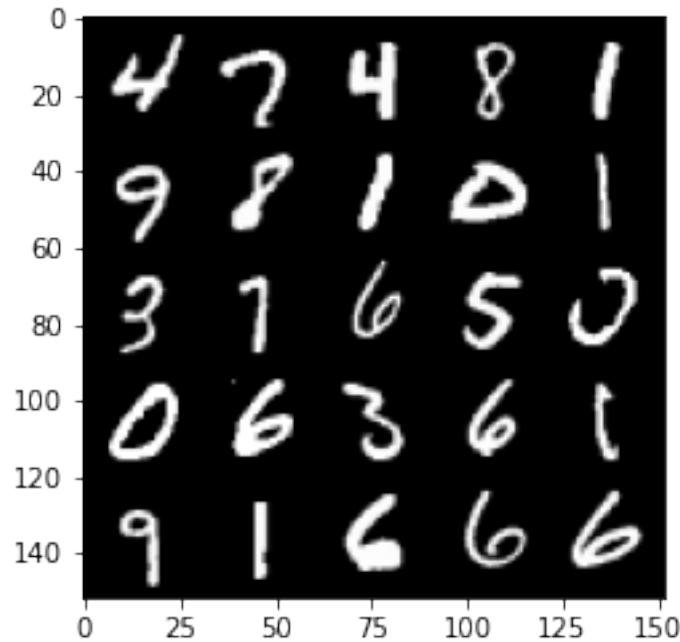
Epoch 352, step 165500 -> generator loss: 0.47083944290876406, discriminator loss: 0.6677152359485624



```
100%|      | 469/469 [00:13<00:00, 34.49it/s]
94%|     | 440/469 [00:12<00:00, 35.53it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

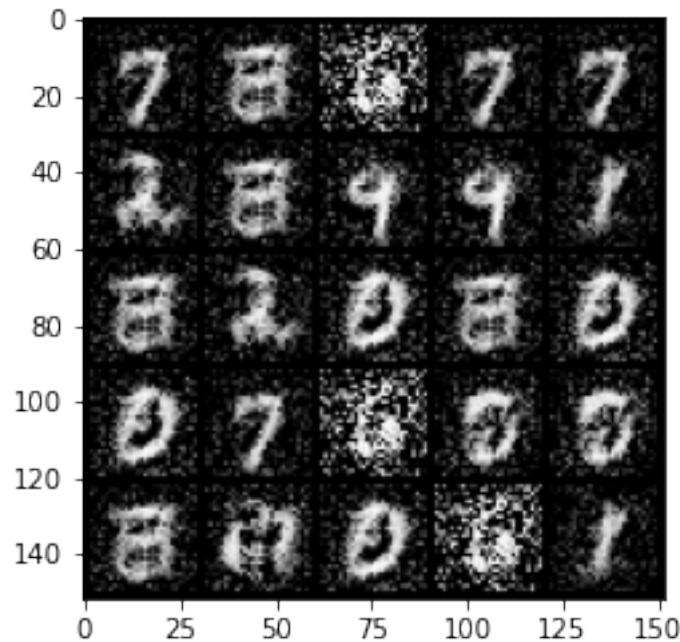
```
Epoch 353, step 166000 -> generator loss: 0.4770266893506049, discriminator
loss: 0.6602013894319537
```

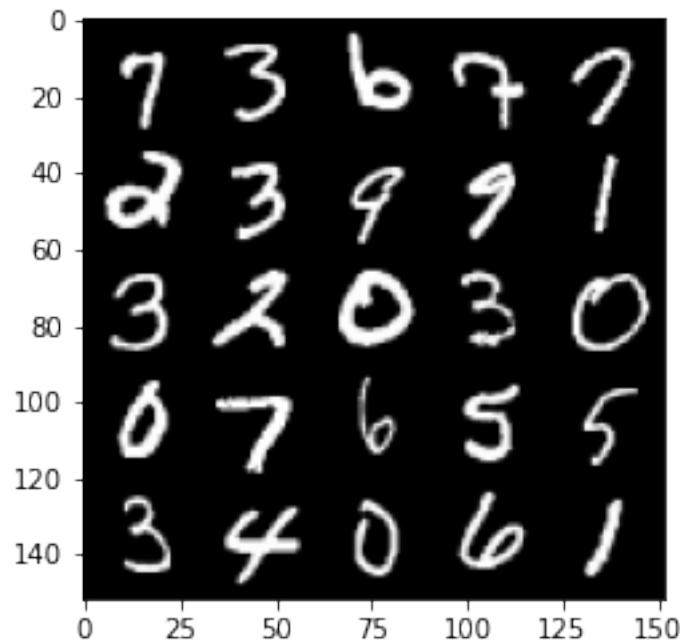




```
100%|    | 469/469 [00:13<00:00, 34.59it/s]
100%|    | 469/469 [00:13<00:00, 35.30it/s]
 1%|    | 3/469 [00:00<00:15, 29.49it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

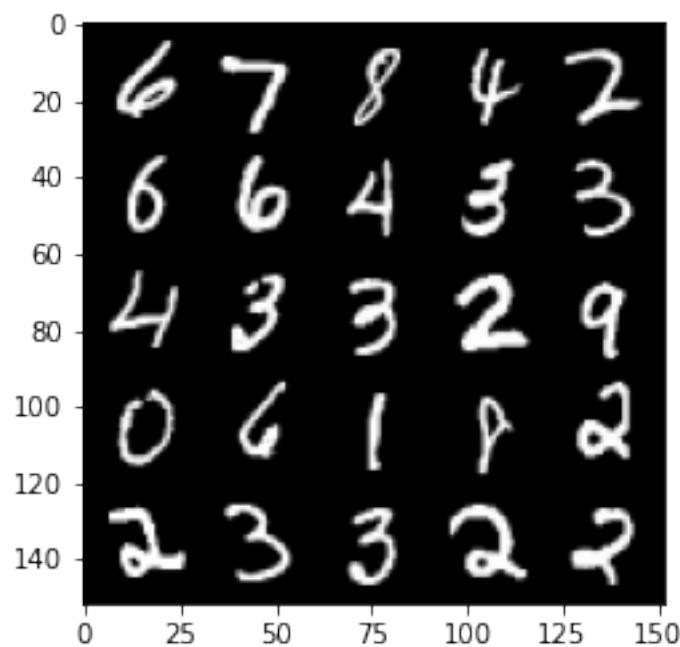
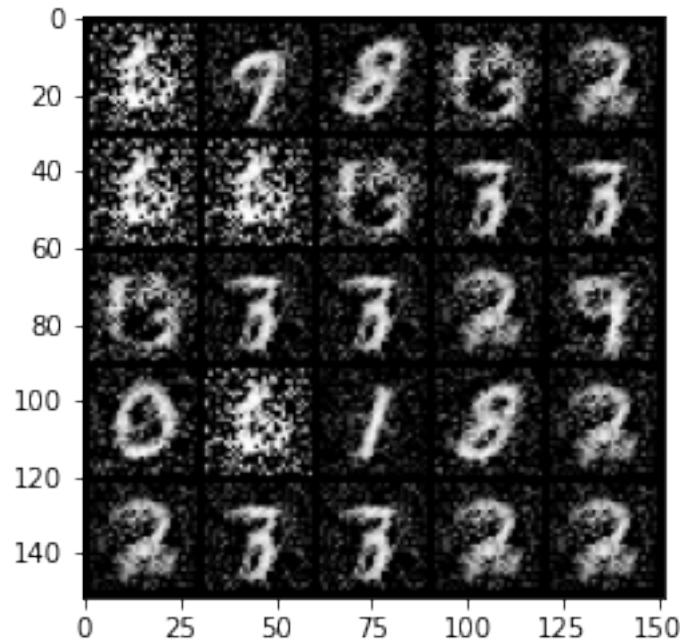
Epoch 355, step 166500 -> generator loss: 0.48913826406002064, discriminator
loss: 0.6430273729562755
```





```
100%| 469/469 [00:13<00:00, 34.27it/s]
 8%| 36/469 [00:01<00:12, 36.06it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

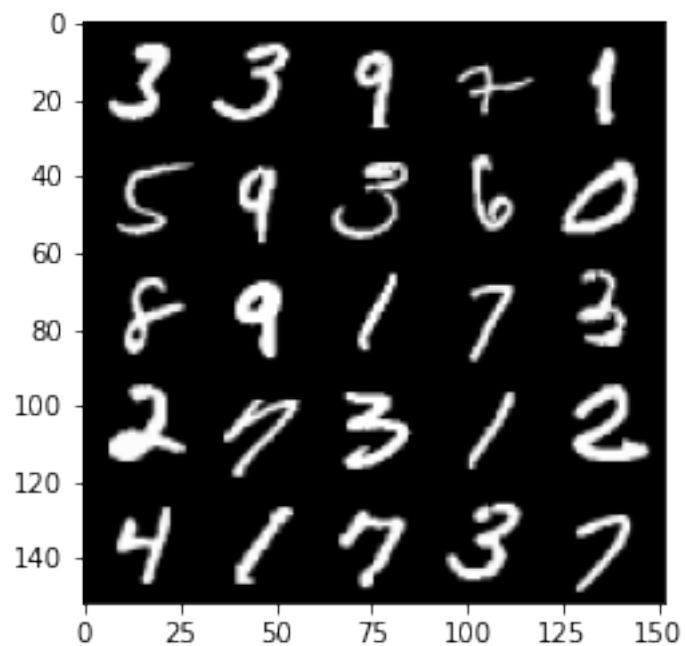
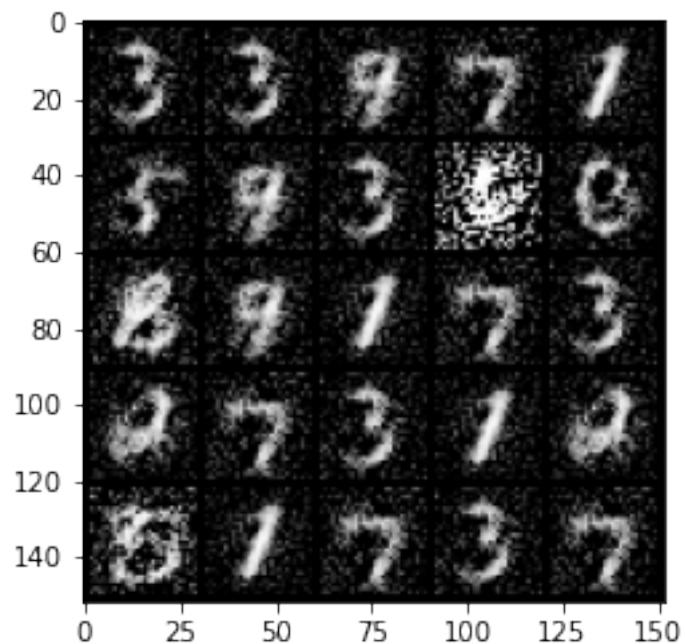
Epoch 356, step 167000 -> generator loss: 0.47175815337896343, discriminator
loss: 0.6689641848802566
```



```
100%| 469/469 [00:13<00:00, 34.15it/s]
14%| 67/469 [00:02<00:11, 34.40it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 357, step 167500 -> generator loss: 0.47567122858762706, discriminator

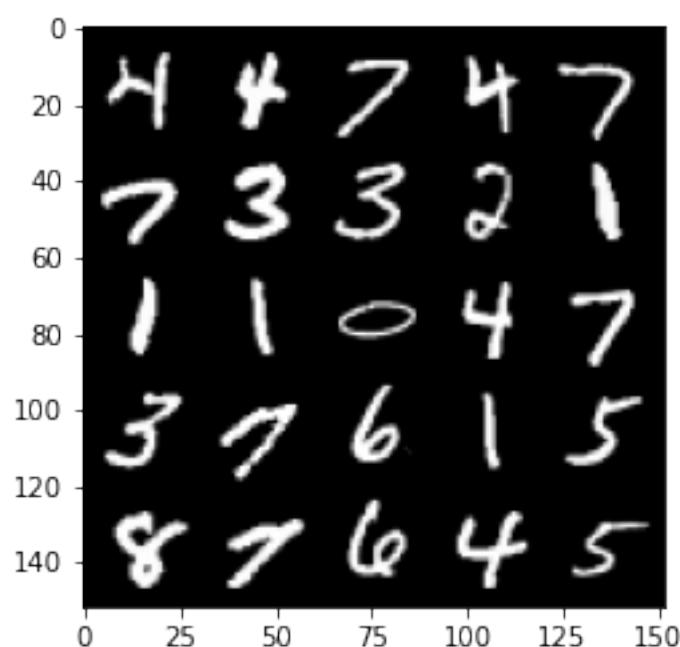
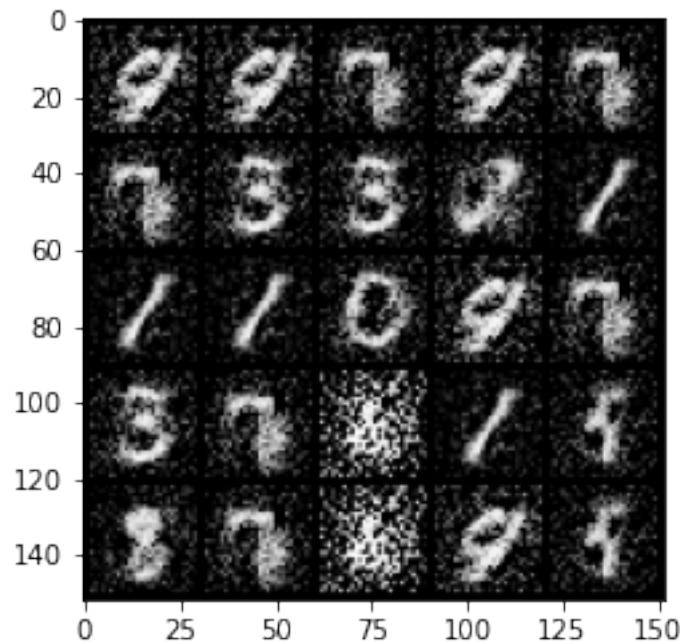
loss: 0.6698548326492308



100% | 469/469 [00:13<00:00, 34.19it/s]  
20% | 95/469 [00:02<00:10, 36.38it/s] Clipping input data to the valid

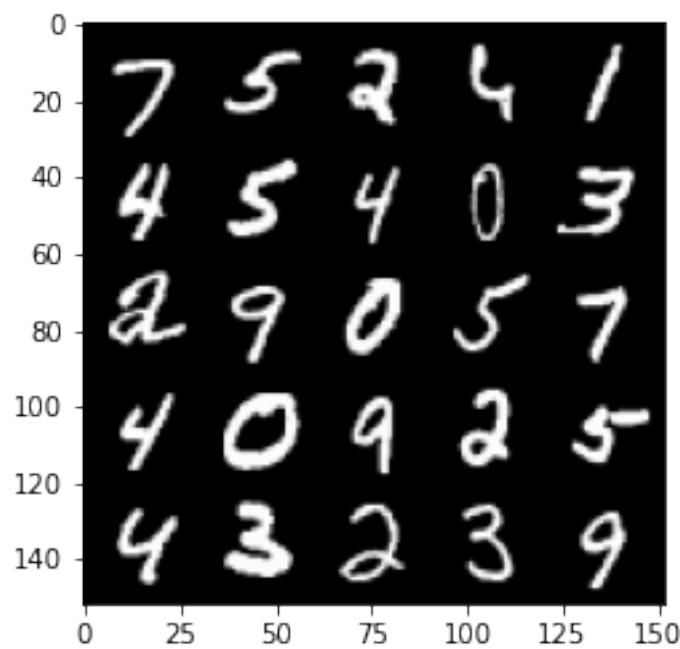
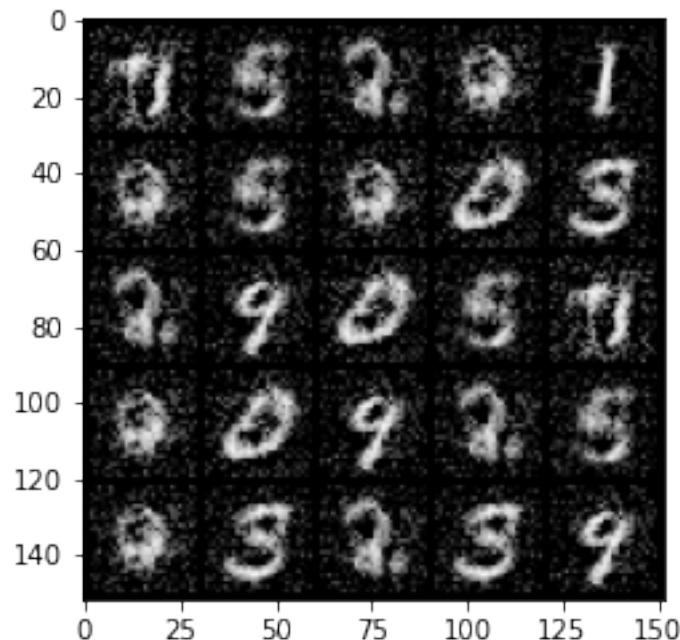
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 358, step 168000 -> generator loss: 0.47453760874271395, discriminator loss: 0.6662505590915672



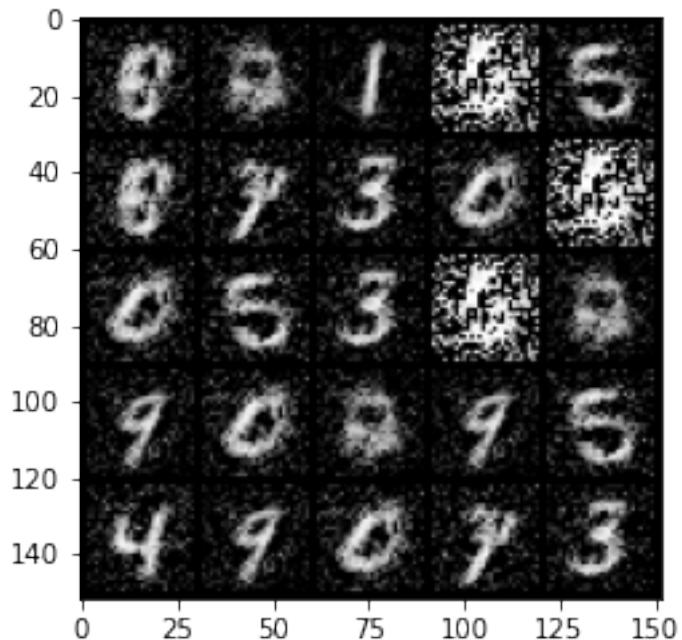
```
100%| 469/469 [00:13<00:00, 34.56it/s]
27%| 128/469 [00:03<00:09, 35.99it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

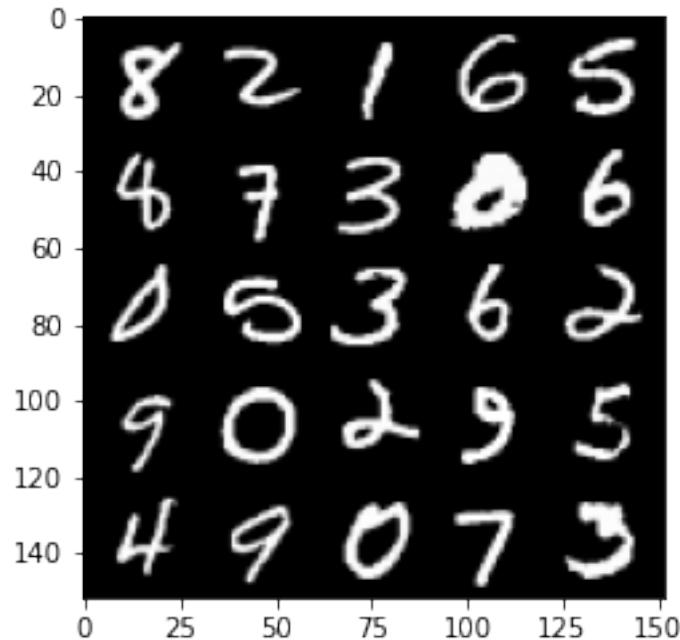
Epoch 359, step 168500 -> generator loss: 0.47723992210626603, discriminator loss: 0.6664736924171453



```
100%|      | 469/469 [00:13<00:00, 34.29it/s]
34%|      | 158/469 [00:04<00:08, 35.51it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

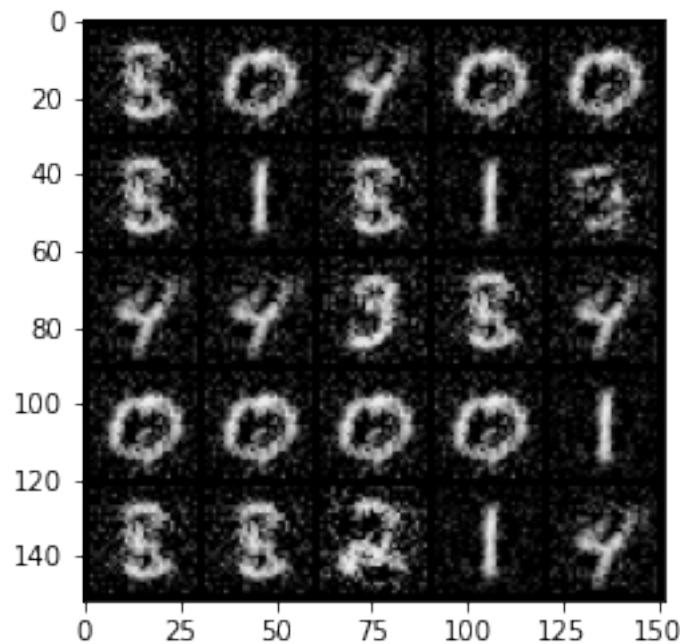
Epoch 360, step 169000 -> generator loss: 0.4642717548608781, discriminator  
loss: 0.6808526151180266

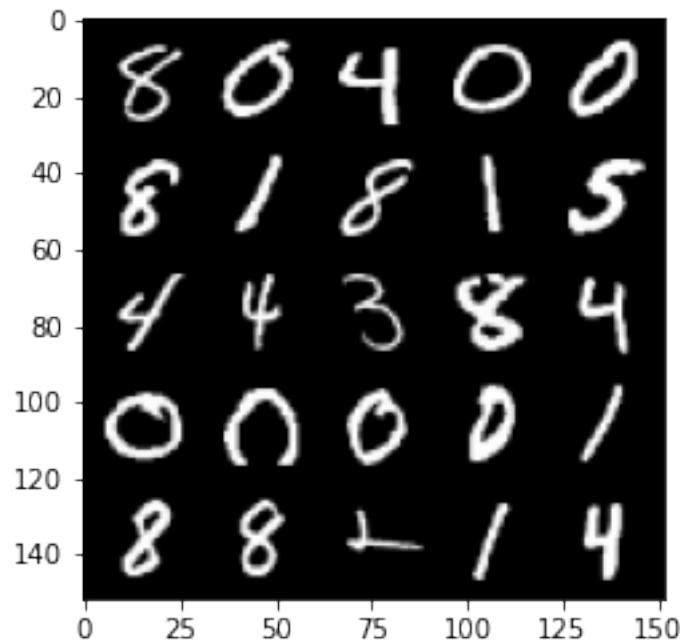




```
100% | 469/469 [00:13<00:00, 34.54it/s]
41% | 191/469 [00:05<00:07, 35.88it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

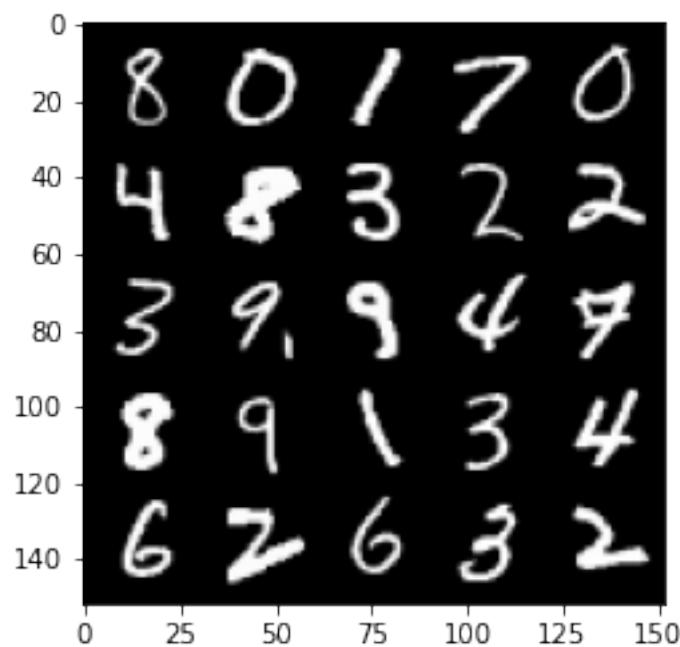
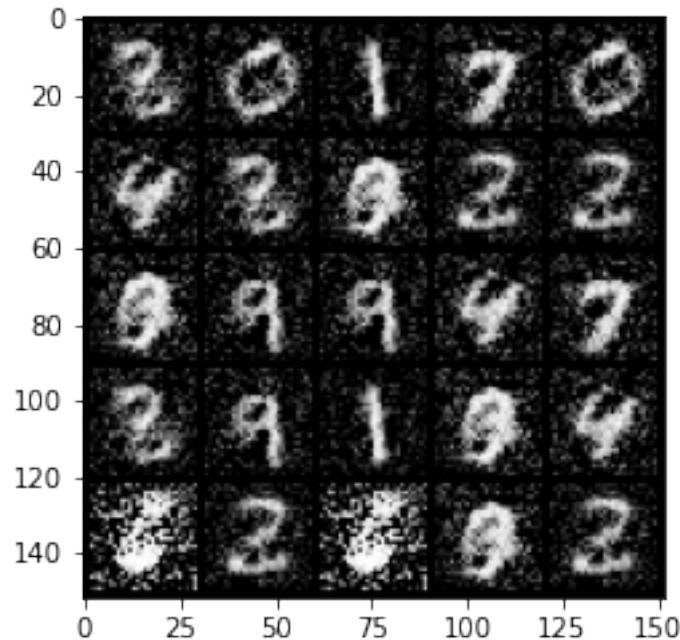
Epoch 361, step 169500 -> generator loss: 0.4733175824284556, discriminator loss: 0.6607012902498239





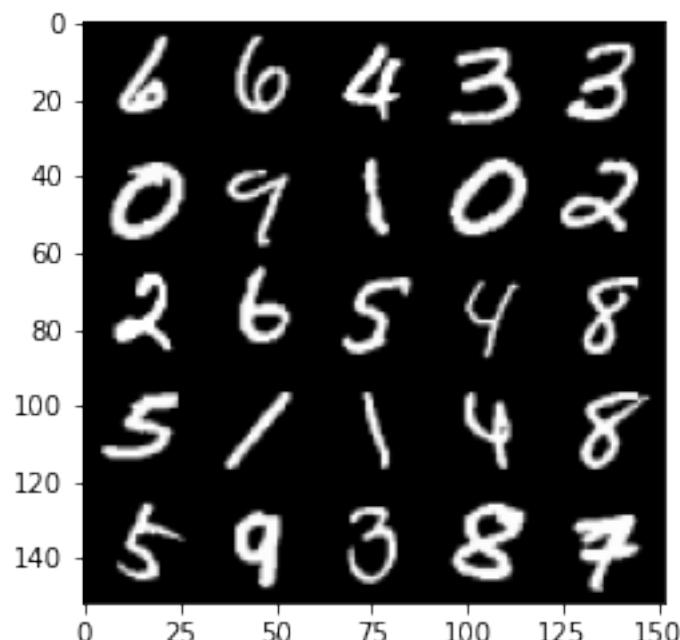
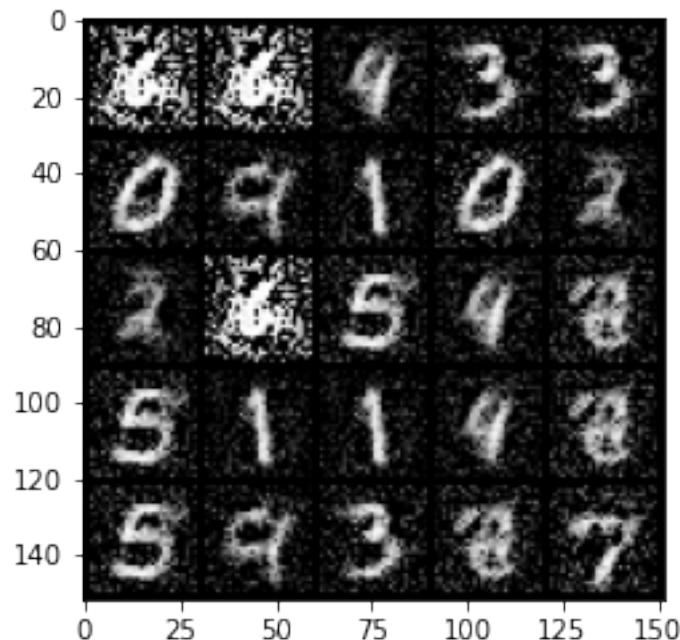
```
100% | 469/469 [00:13<00:00, 34.44it/s]
47% | 220/469 [00:06<00:07, 35.39it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 362, step 170000 -> generator loss: 0.4699775341749193, discriminator
loss: 0.6719017599821084
```



```
100%| 469/469 [00:13<00:00, 34.49it/s]
53%| 250/469 [00:06<00:06, 36.30it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

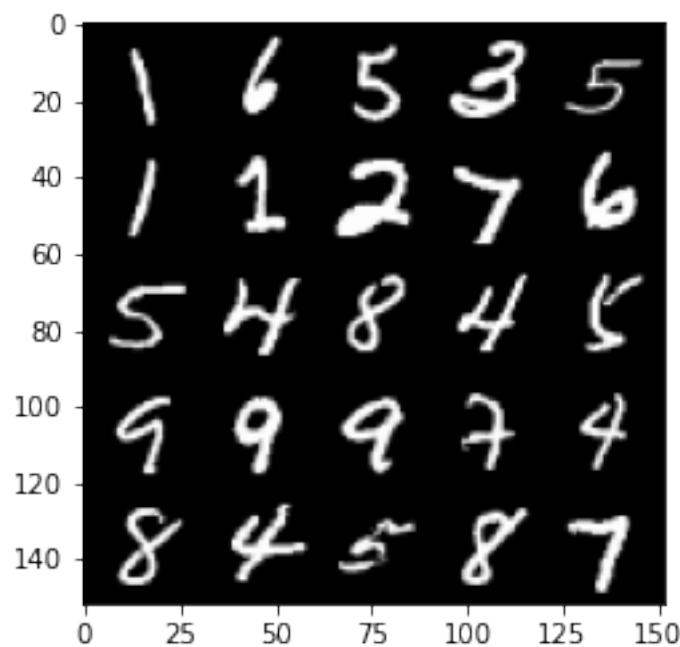
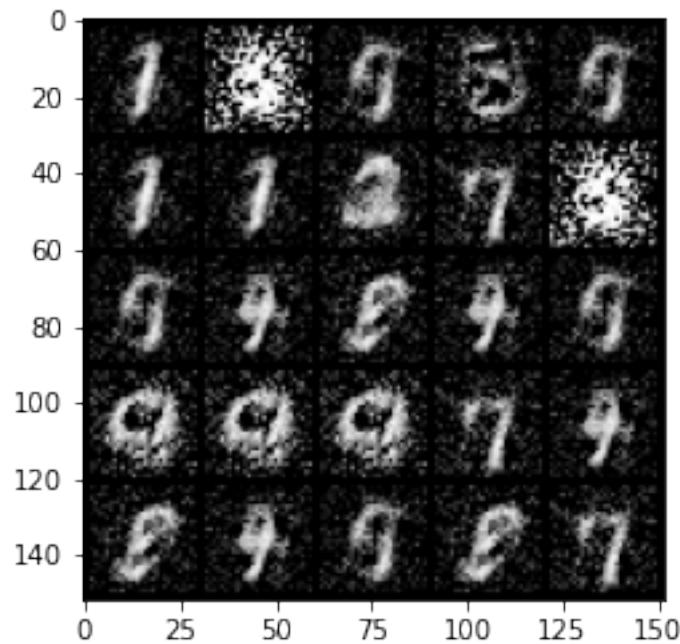
Epoch 363, step 170500 -> generator loss: 0.4766625806093213, discriminator loss: 0.6624450801610947



100% | 469/469 [00:13<00:00, 34.40it/s]

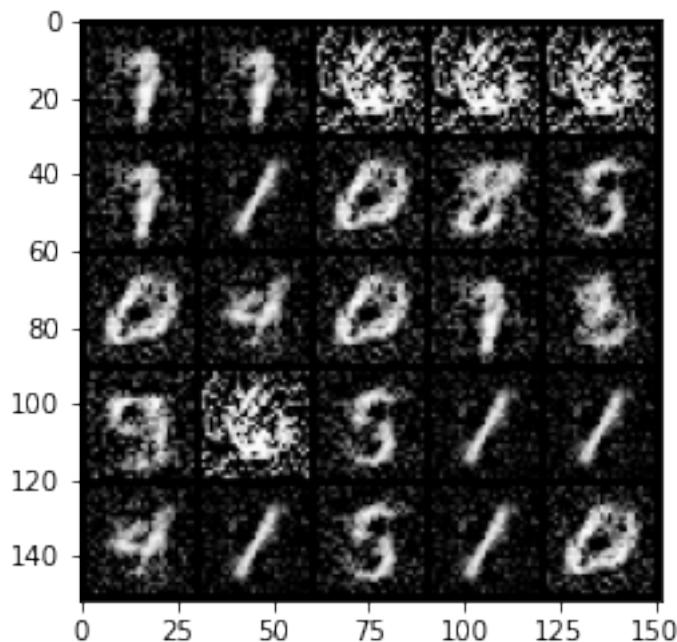
60%| 282/469 [00:08<00:05, 33.93it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

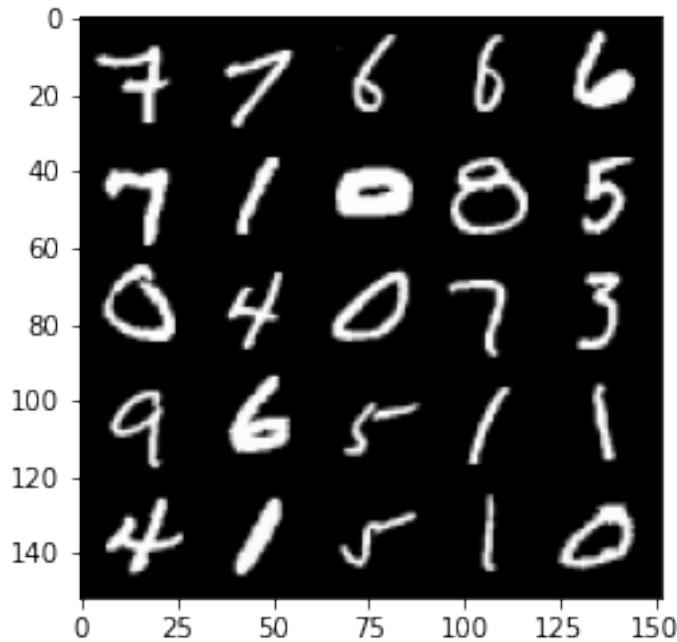
Epoch 364, step 171000 -> generator loss: 0.47075858044624314, discriminator loss: 0.6719121201038357



```
100%|      | 469/469 [00:14<00:00, 33.15it/s]
67%|      | 314/469 [00:09<00:04, 33.05it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

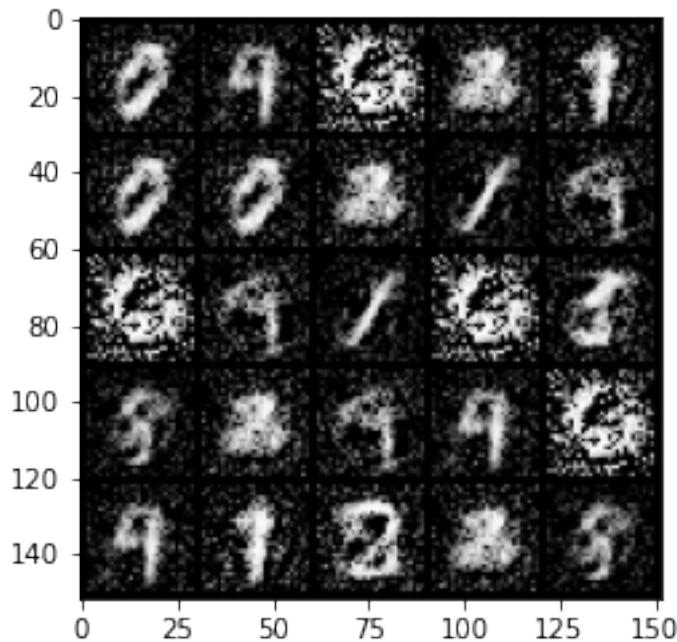
Epoch 365, step 171500 -> generator loss: 0.47281608736515035, discriminator loss: 0.6545582200288775

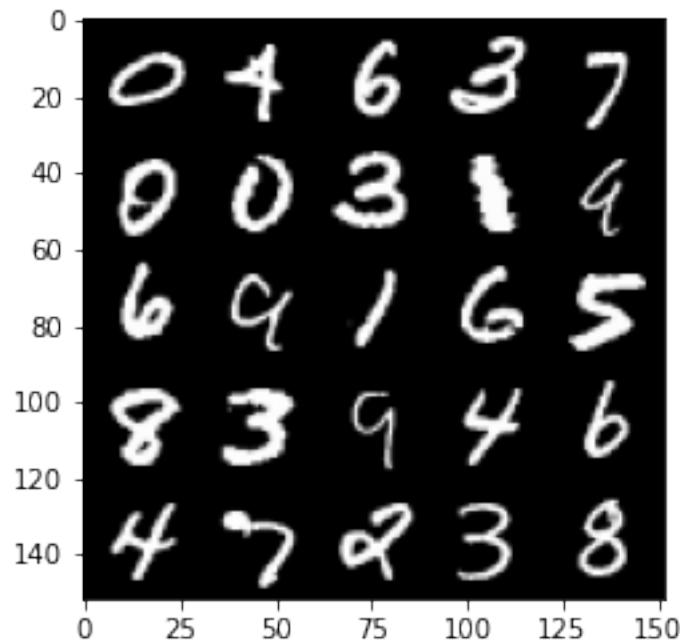




```
100%|      | 469/469 [00:14<00:00, 32.74it/s]
73%|      | 343/469 [00:09<00:03, 35.76it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

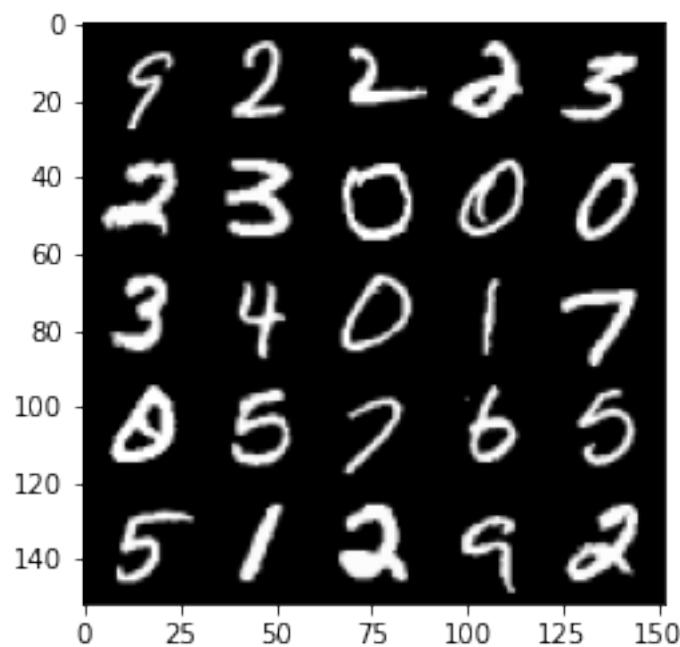
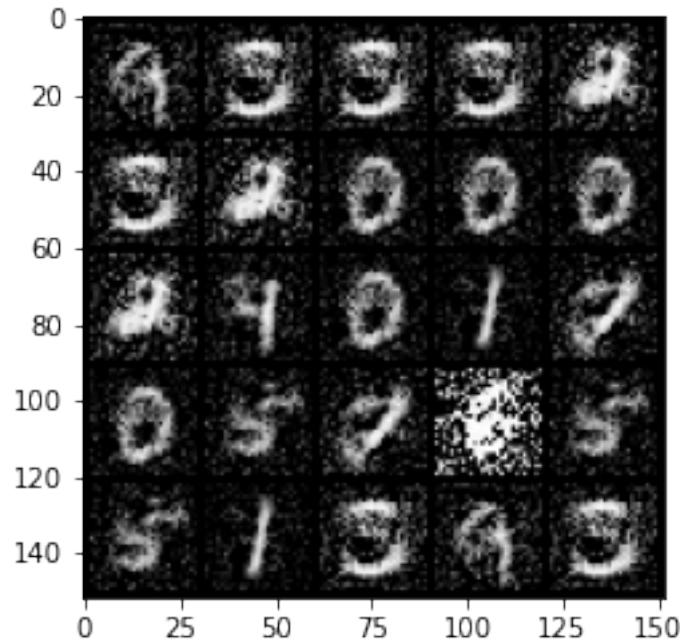
```
Epoch 366, step 172000 -> generator loss: 0.4835953918695444, discriminator
loss: 0.6461049580574031
```





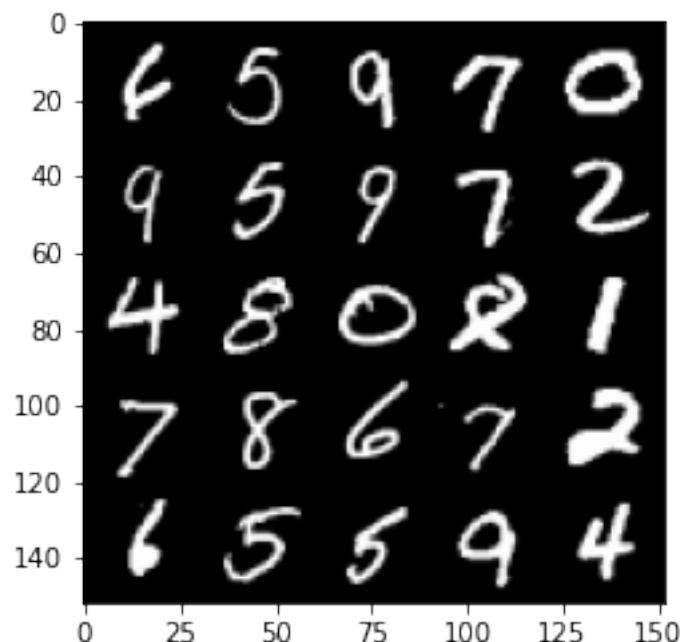
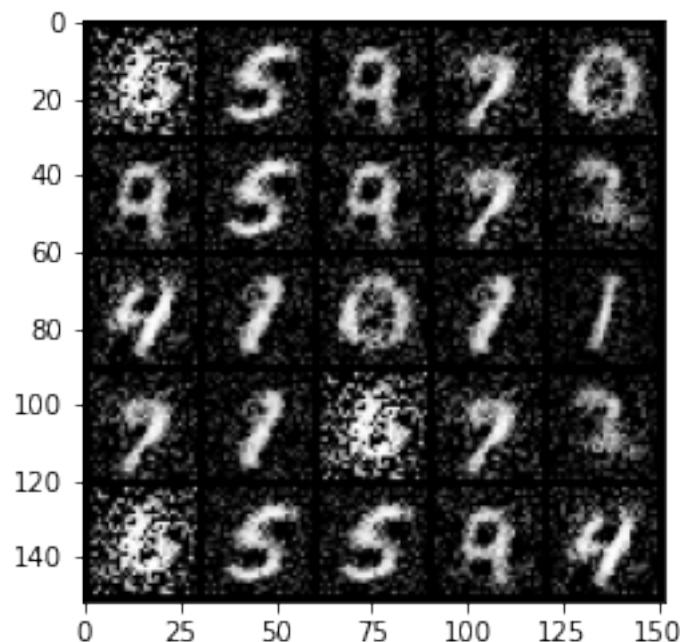
```
100%| 469/469 [00:13<00:00, 34.47it/s]
80%| 374/469 [00:10<00:02, 35.55it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 367, step 172500 -> generator loss: 0.48155432736873655, discriminator
loss: 0.6521555122137075
```



```
100%|      | 469/469 [00:13<00:00, 34.50it/s]
87%|      | 408/469 [00:11<00:01, 35.60it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

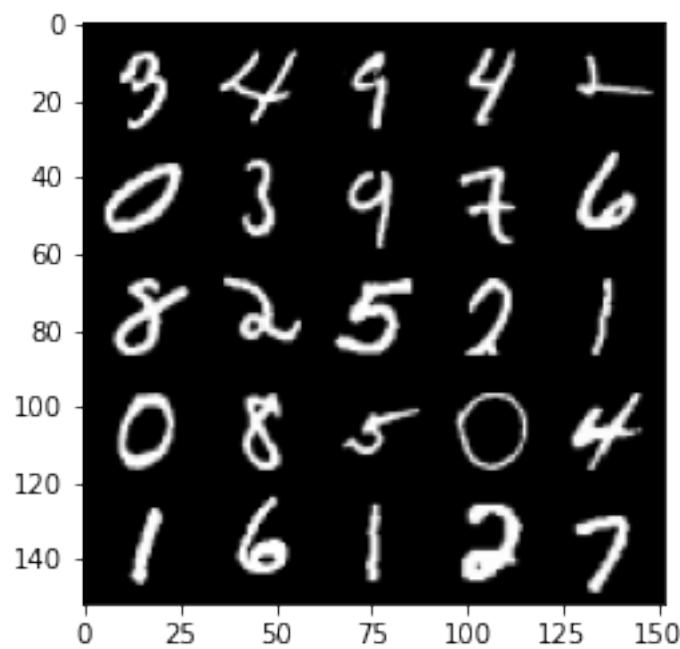
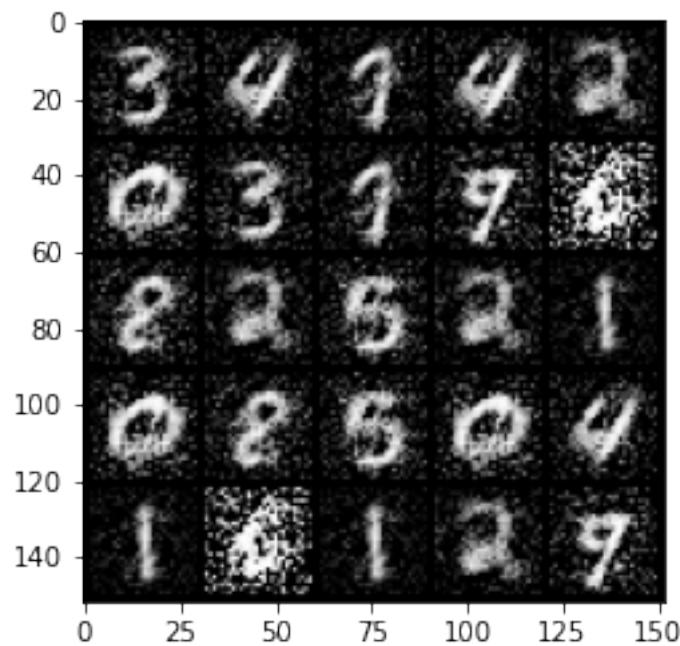
Epoch 368, step 173000 -> generator loss: 0.47572519415616965, discriminator loss: 0.6692504305839538



100% | 469/469 [00:13<00:00, 34.48it/s]

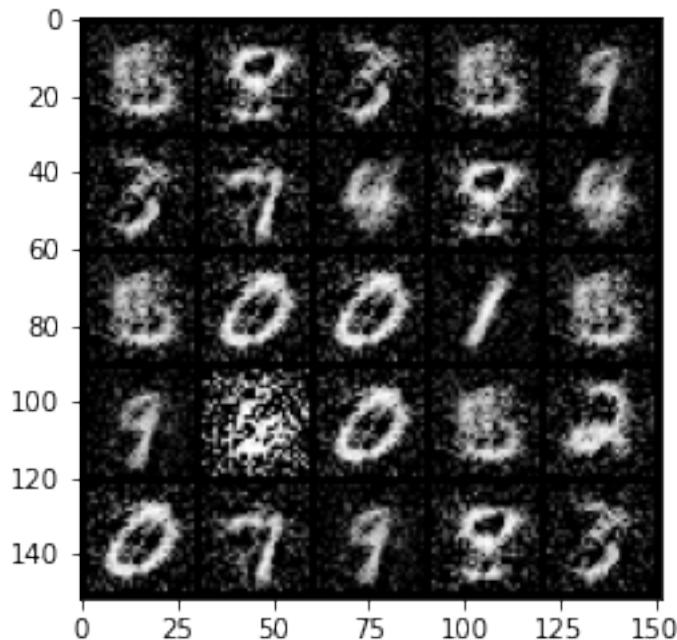
93%| 436/469 [00:12<00:00, 35.88it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

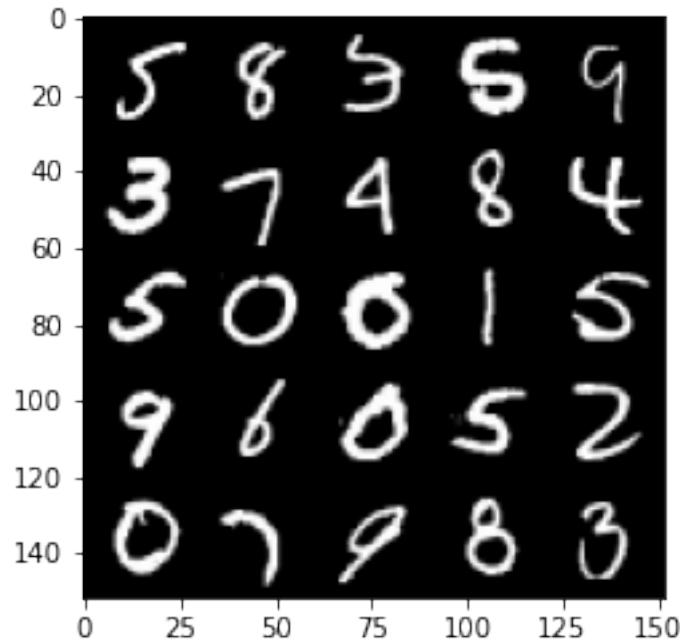
Epoch 369, step 173500 -> generator loss: 0.4584664591550818, discriminator loss: 0.6917684409618382



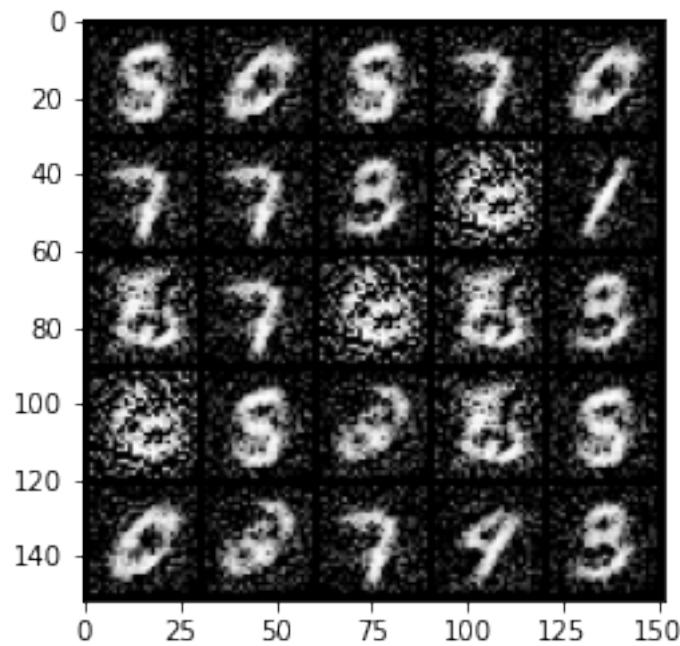
```
100%|    | 469/469 [00:13<00:00, 34.46it/s]
100%|    | 469/469 [00:13<00:00, 35.59it/s]
  0%|    | 0/469 [00:00<?, ?it/s]Clipping input data to the valid range
for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

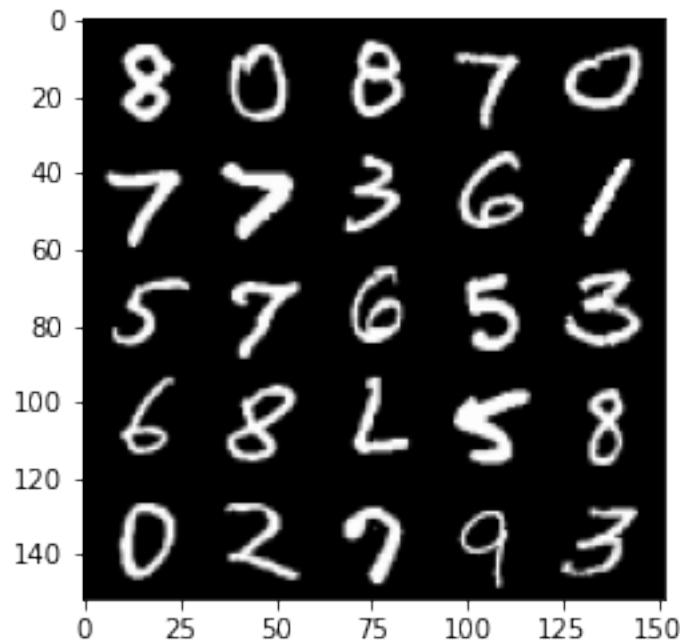
Epoch 371, step 174000 -> generator loss: 0.463671396791935, discriminator loss:  
0.6930762988328937



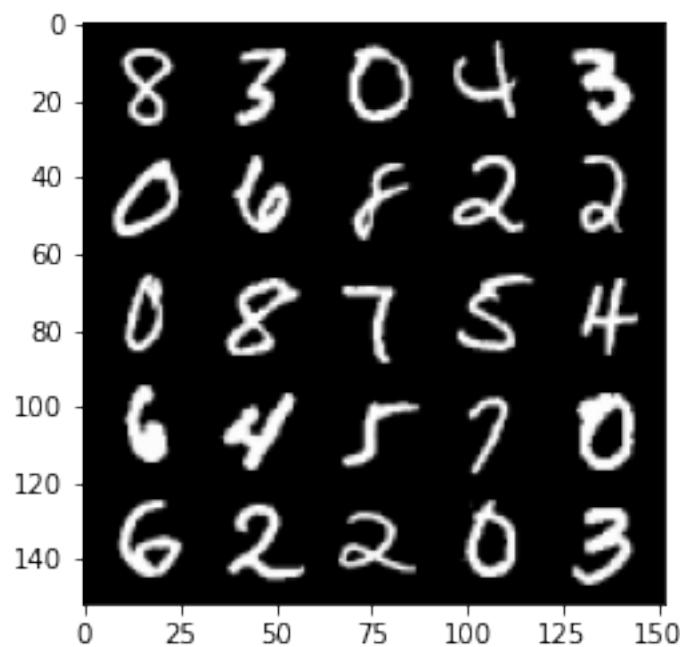
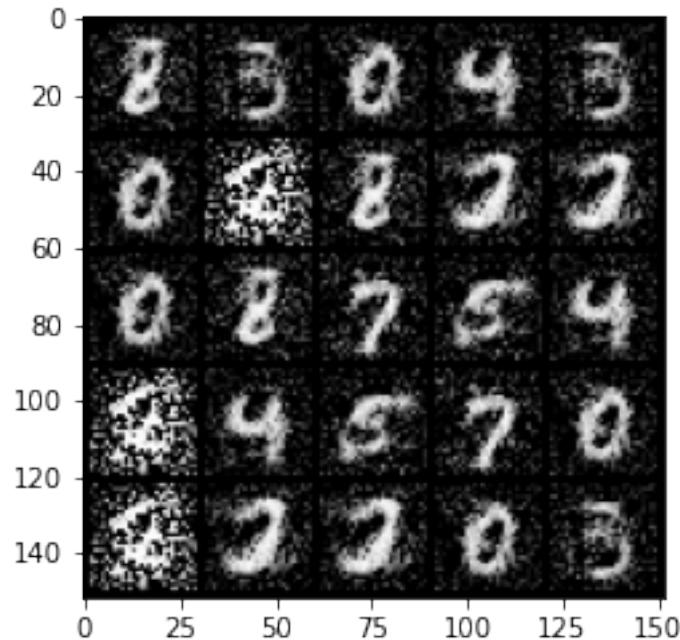


```
100%|      | 469/469 [00:13<00:00, 34.55it/s]
 7%|      | 32/469 [00:00<00:12, 35.90it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 372, step 174500 -> generator loss: 0.46335489261150353, discriminator
loss: 0.6873566114902496
```





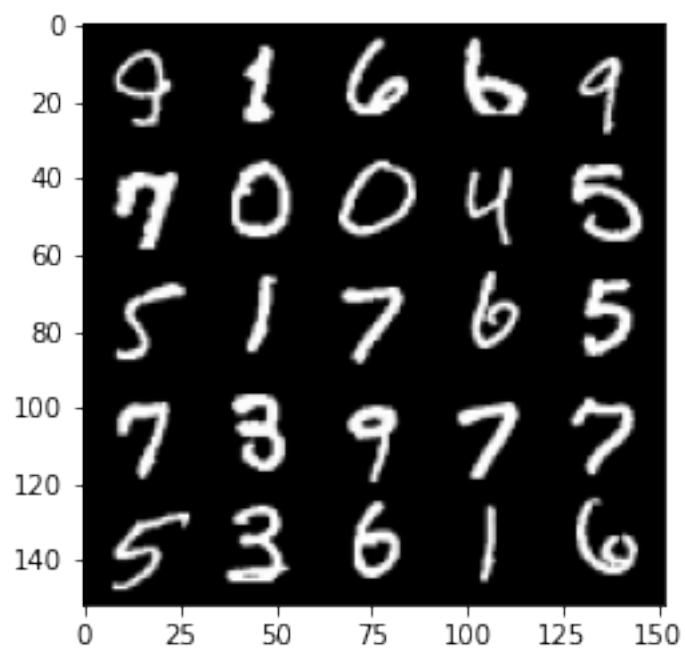
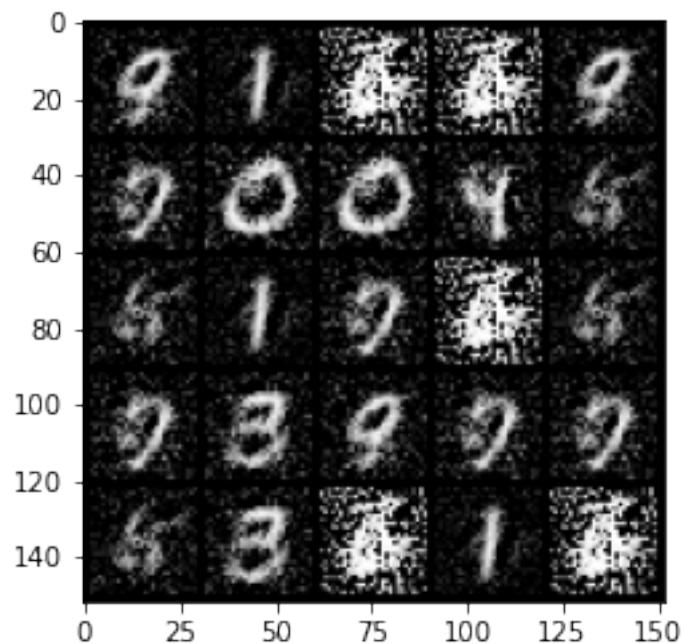
```
100%| 469/469 [00:13<00:00, 34.26it/s]
13%| 60/469 [00:01<00:11, 36.11it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 373, step 175000 -> generator loss: 0.4632584573626517, discriminator
loss: 0.6867027707099914
```



```
100%| 469/469 [00:13<00:00, 34.73it/s]
20%| 94/469 [00:02<00:10, 35.18it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 374, step 175500 -> generator loss: 0.46933400803804426, discriminator

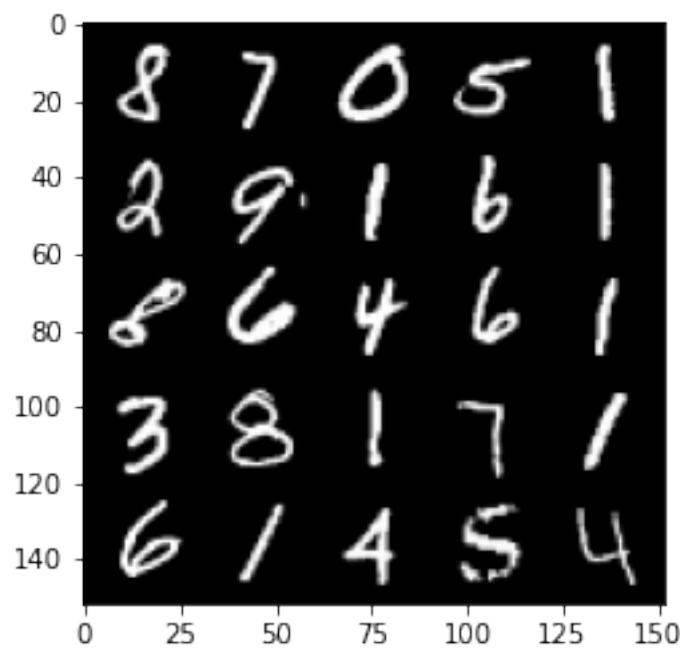
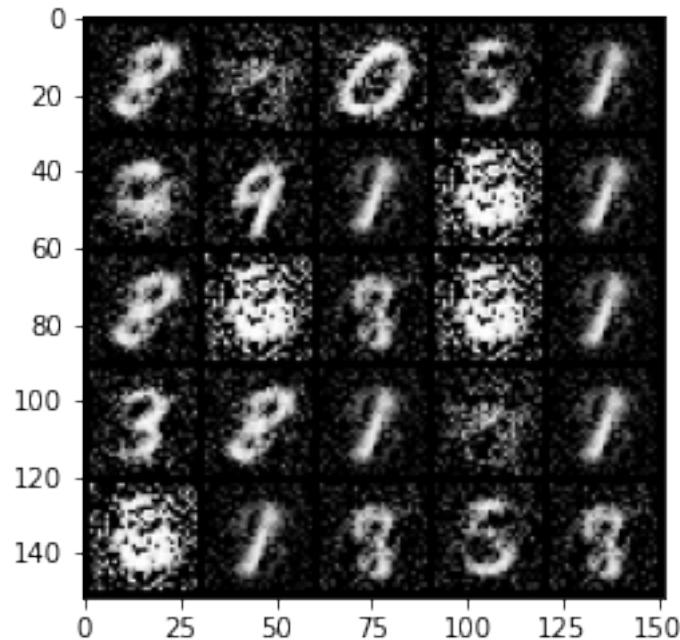
loss: 0.6732890095710757



100% | 469/469 [00:13<00:00, 34.37it/s]  
26% | 124/469 [00:03<00:09, 34.83it/s] Clipping input data to the

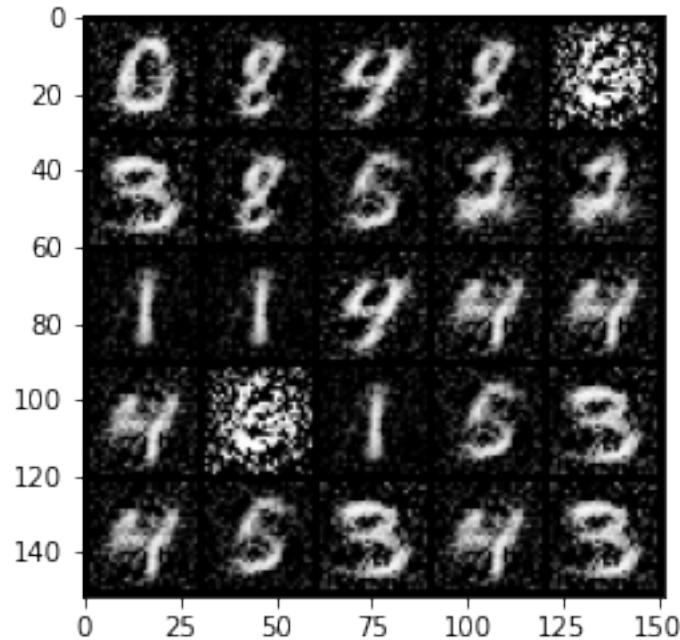
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

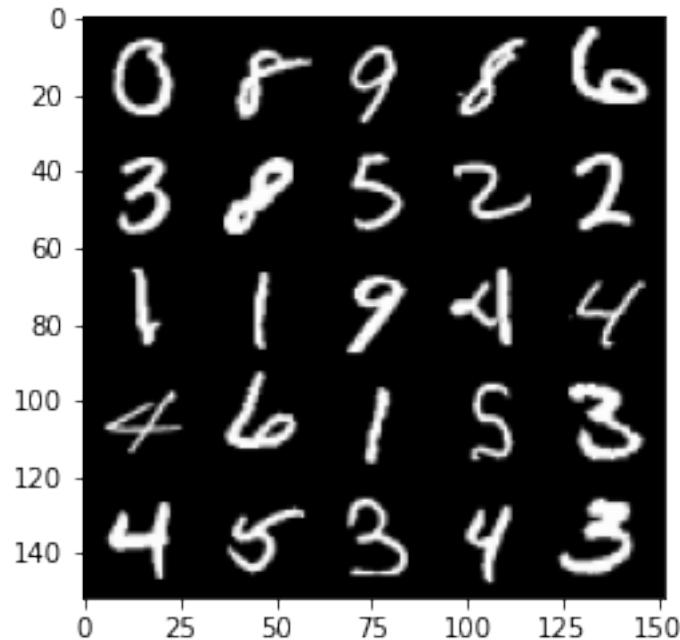
Epoch 375, step 176000 -> generator loss: 0.46907854056358367, discriminator loss: 0.6658526510000232



```
100%|      | 469/469 [00:13<00:00, 34.40it/s]
33%|      | 155/469 [00:04<00:08, 36.31it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

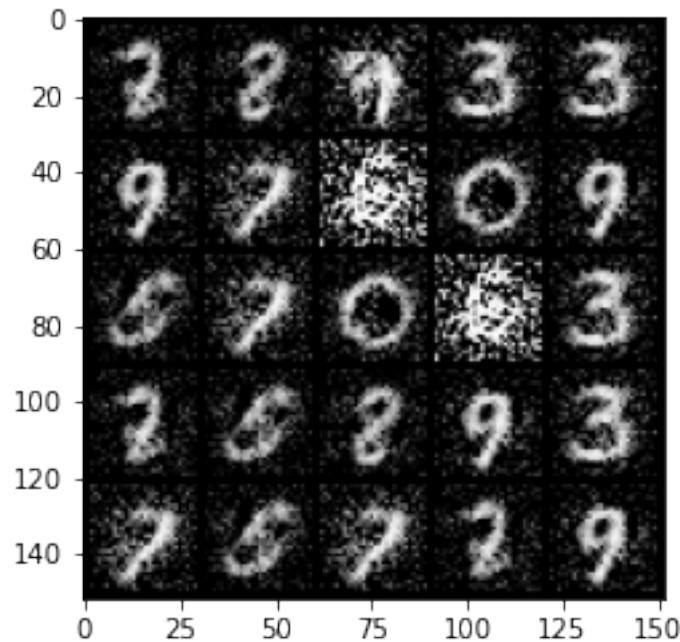
Epoch 376, step 176500 -> generator loss: 0.48963501304388046, discriminator loss: 0.6378845818042754

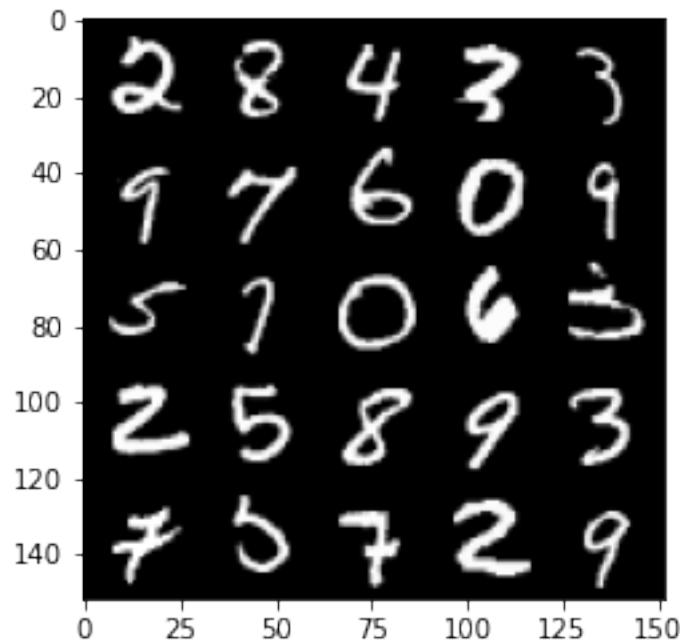




```
100%|      | 469/469 [00:13<00:00, 34.54it/s]
39%|      | 184/469 [00:05<00:07, 35.83it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

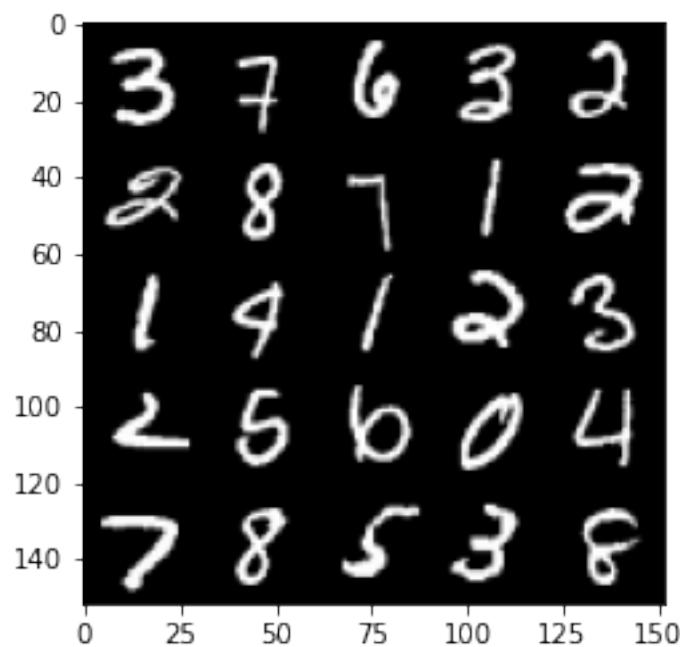
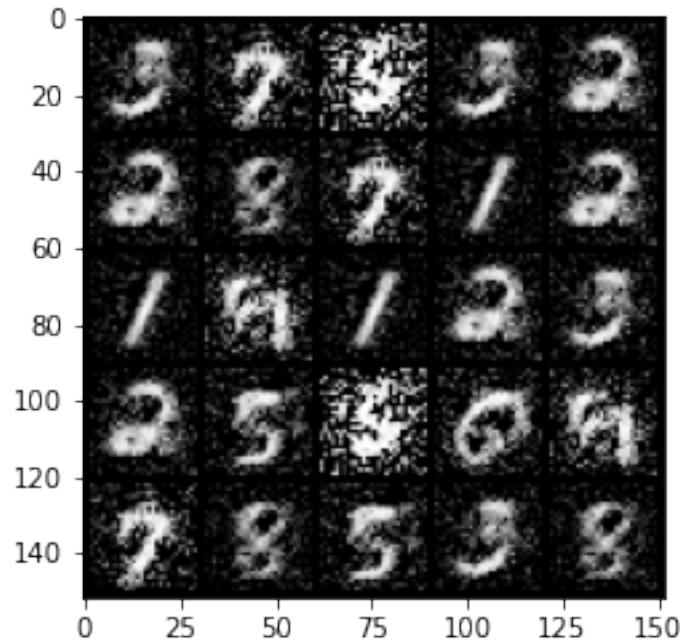
Epoch 377, step 177000 -> generator loss: 0.47345241481065786, discriminator loss: 0.6727463132143021





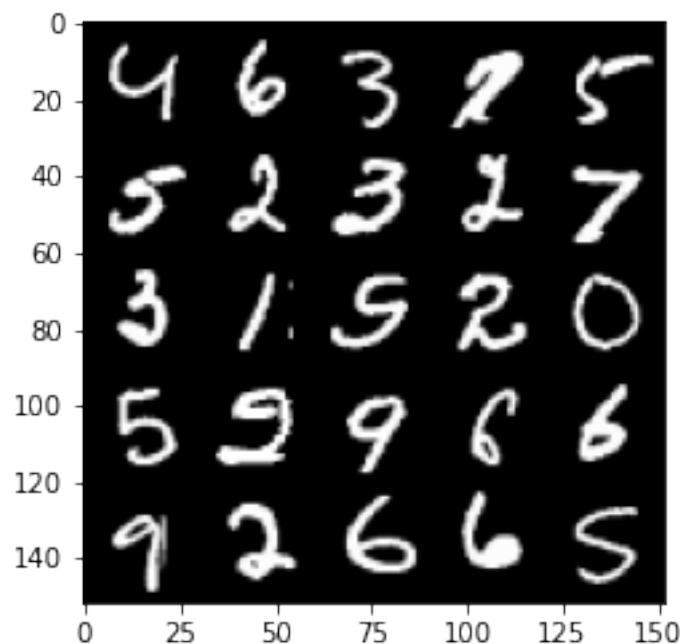
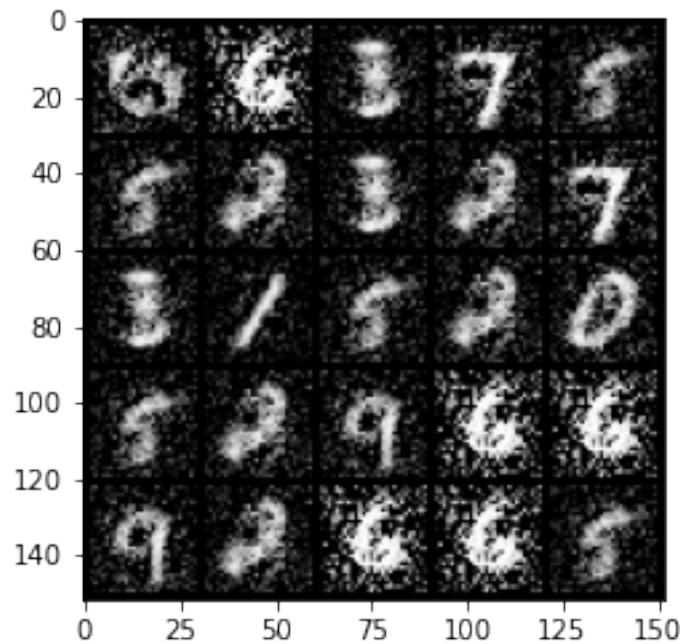
```
100% | 469/469 [00:13<00:00, 34.29it/s]
46% | 216/469 [00:06<00:07, 34.89it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 378, step 177500 -> generator loss: 0.4703414031267166, discriminator
loss: 0.6690087991952897
```



```
100%| 469/469 [00:13<00:00, 34.03it/s]
53%| 248/469 [00:06<00:06, 35.48it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

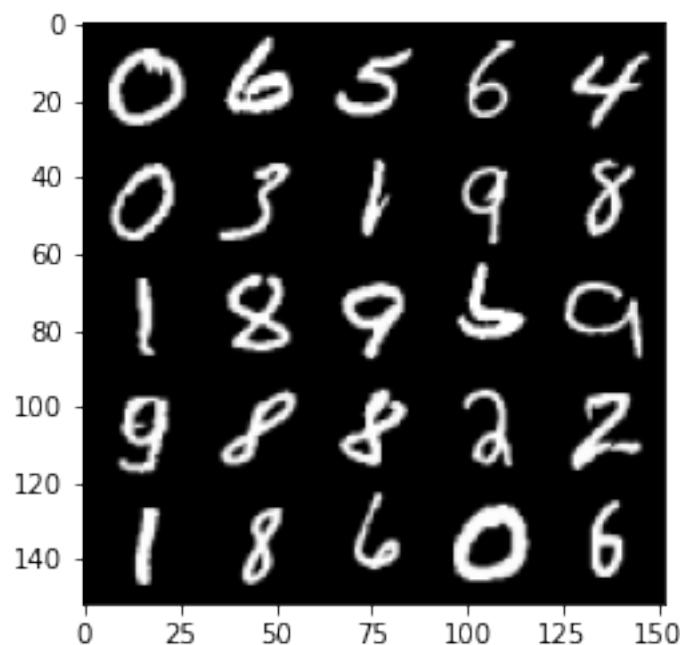
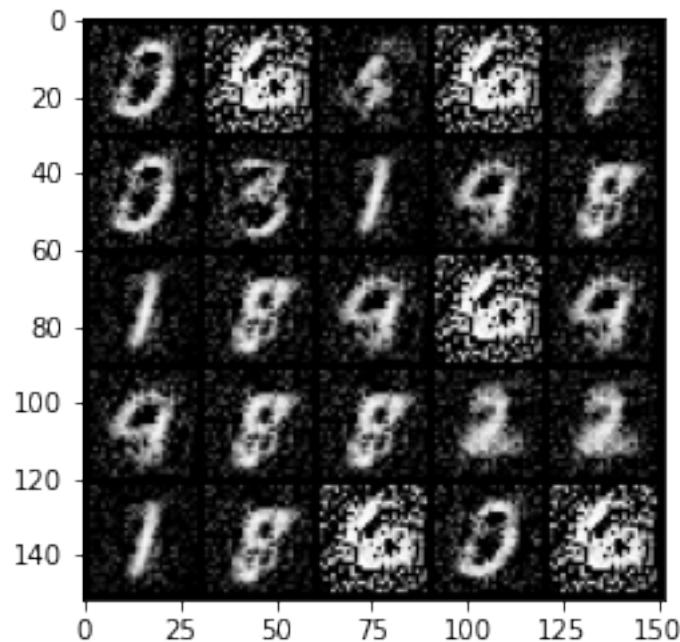
Epoch 379, step 178000 -> generator loss: 0.4688836948275567, discriminator loss: 0.6744189207553862



100% | 469/469 [00:13<00:00, 34.24it/s]

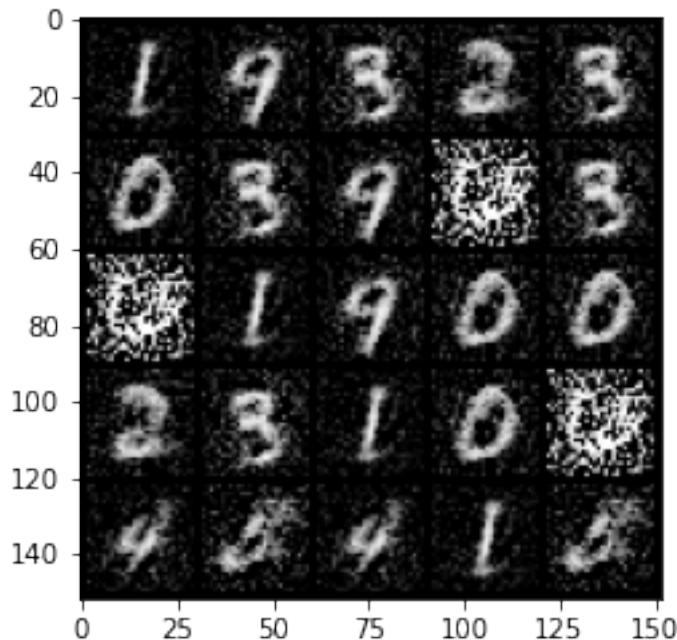
60%| 280/469 [00:07<00:05, 36.29it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

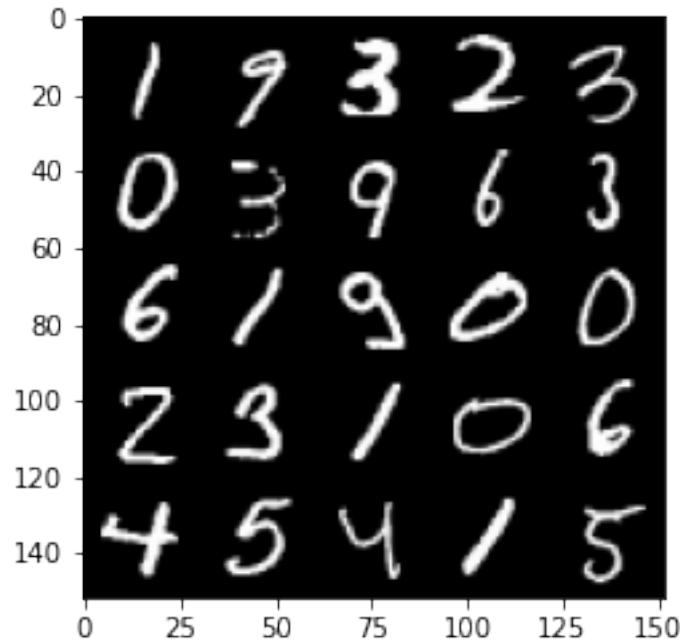
Epoch 380, step 178500 -> generator loss: 0.47770689463615446, discriminator loss: 0.6606328459978098



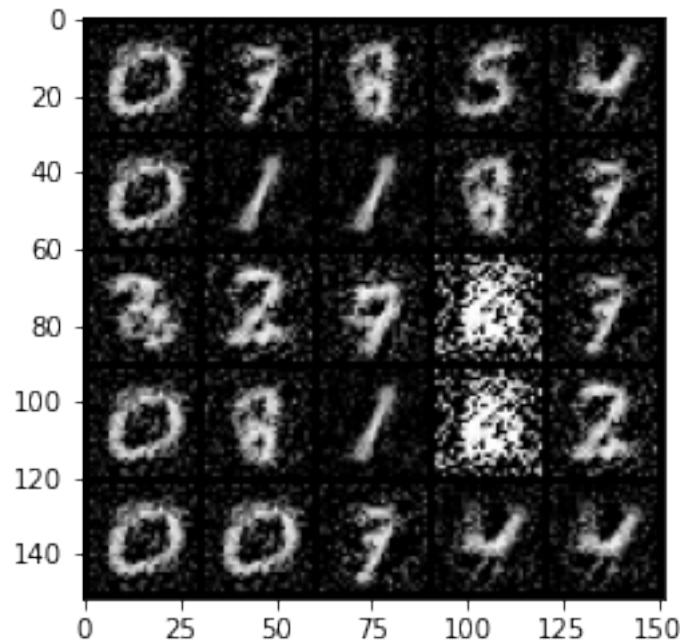
```
100%|      | 469/469 [00:13<00:00, 34.75it/s]
66%|      | 311/469 [00:08<00:04, 36.45it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

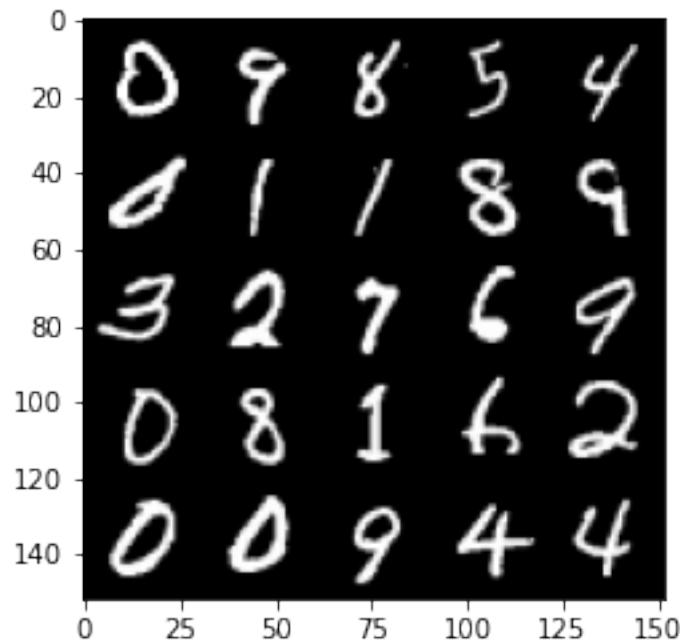
```
Epoch 381, step 179000 -> generator loss: 0.47598864233493854, discriminator
loss: 0.6558914638757707
```





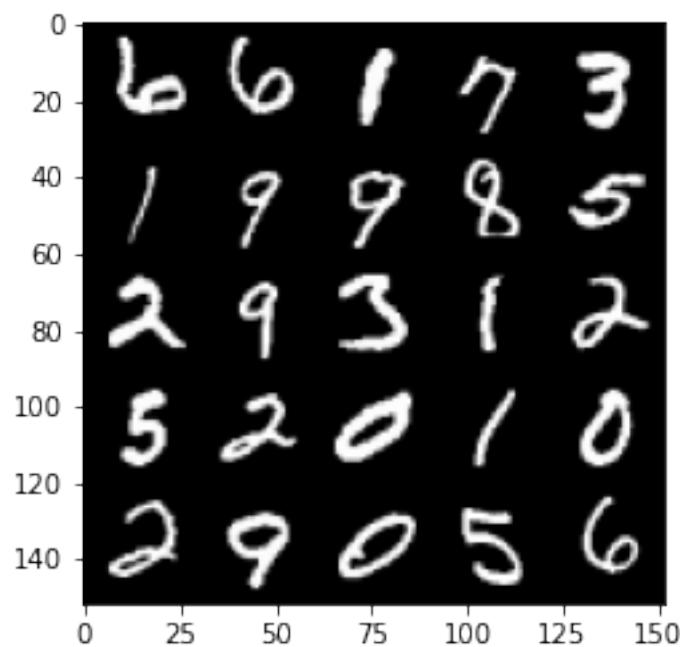
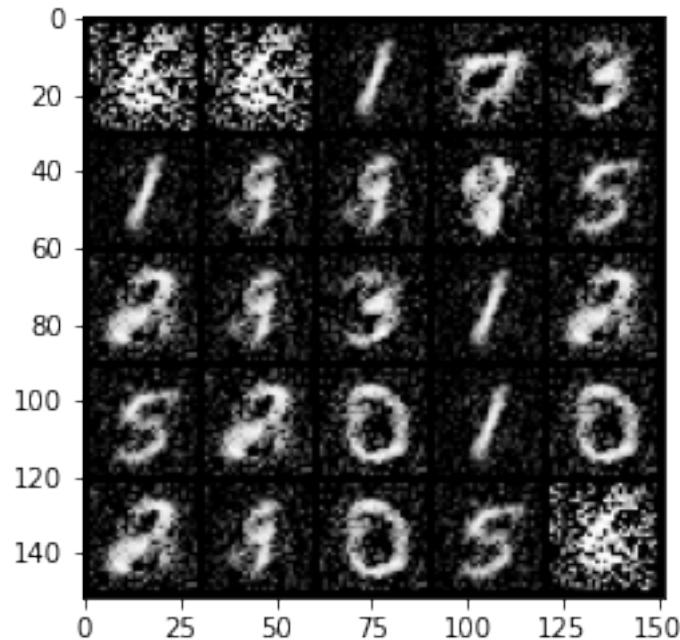
```
100%|      | 469/469 [00:13<00:00, 34.38it/s]
72%|      | 340/469 [00:09<00:04, 31.36it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
Epoch 382, step 179500 -> generator loss: 0.469400077521801, discriminator loss:
0.672538615822792
```





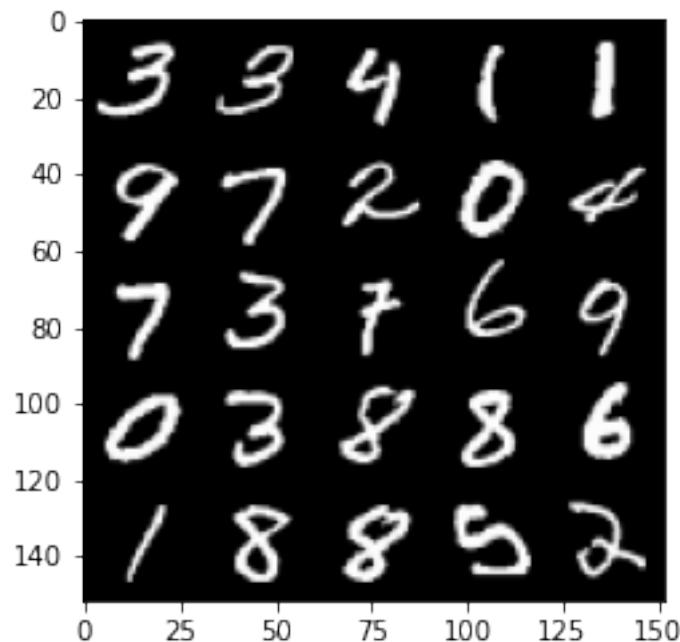
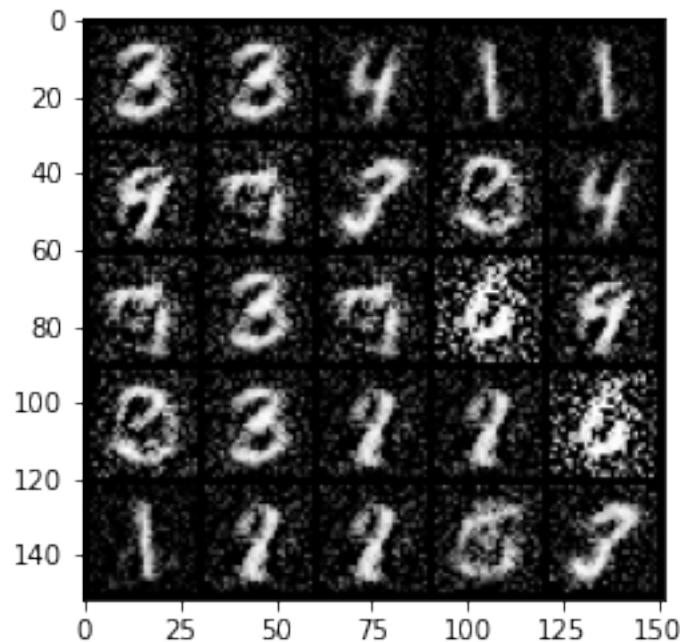
```
100% | 469/469 [00:13<00:00, 34.34it/s]
79% | 370/469 [00:10<00:02, 36.07it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 383, step 180000 -> generator loss: 0.46846617287397396, discriminator
loss: 0.677465149998665
```



```
100%|      | 469/469 [00:13<00:00, 34.39it/s]
86%|      | 403/469 [00:11<00:01, 35.50it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

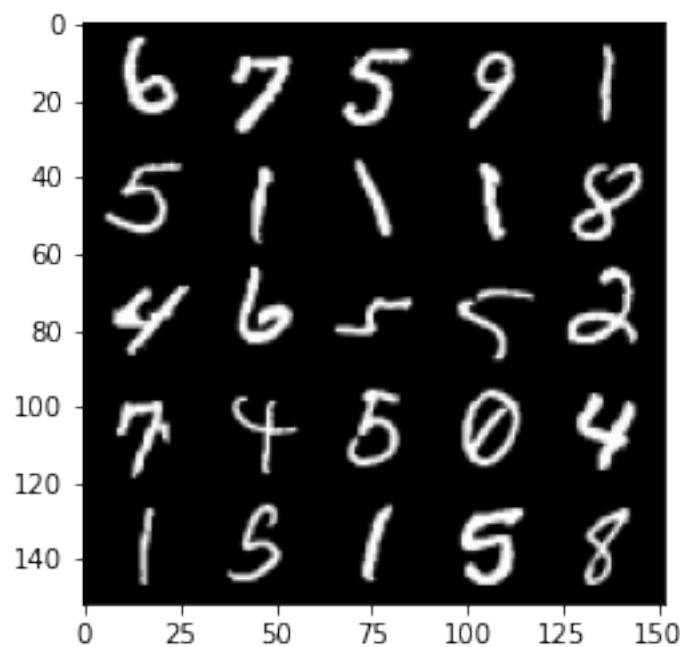
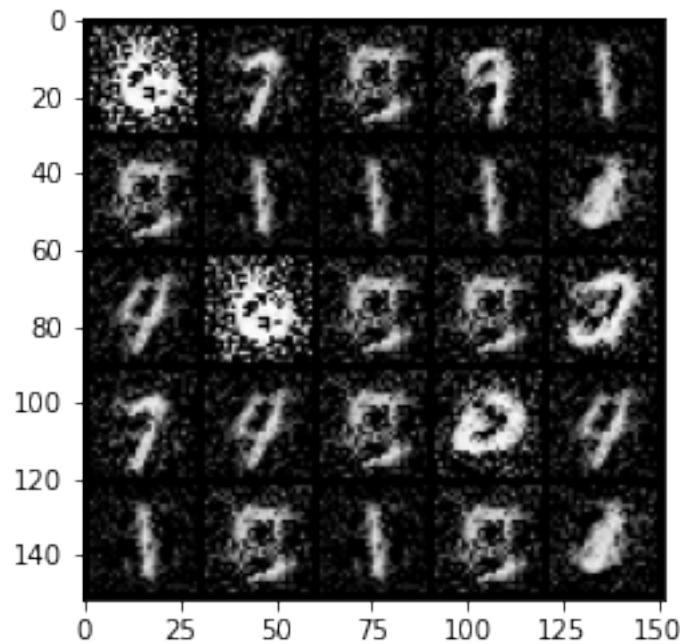
Epoch 384, step 180500 -> generator loss: 0.47231037724018066, discriminator loss: 0.6712966831922536



100% | 469/469 [00:13<00:00, 34.56it/s]

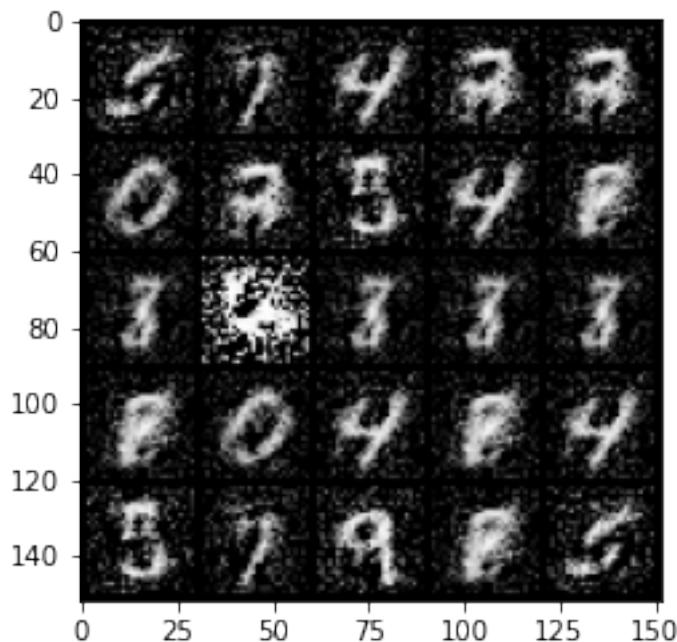
92%| 432/469 [00:12<00:01, 35.66it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

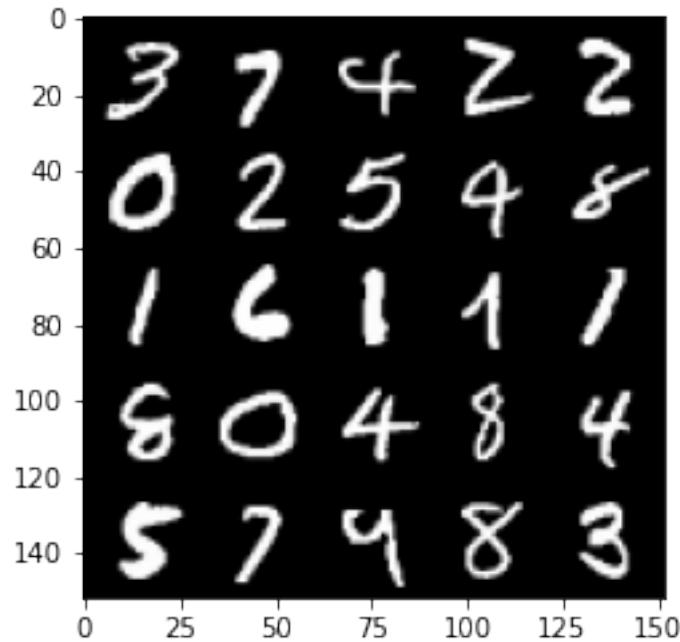
Epoch 385, step 181000 -> generator loss: 0.4724615680575372, discriminator loss: 0.6689614108800889



```
100%| 469/469 [00:13<00:00, 34.49it/s]
99%| 464/469 [00:12<00:00, 36.24it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

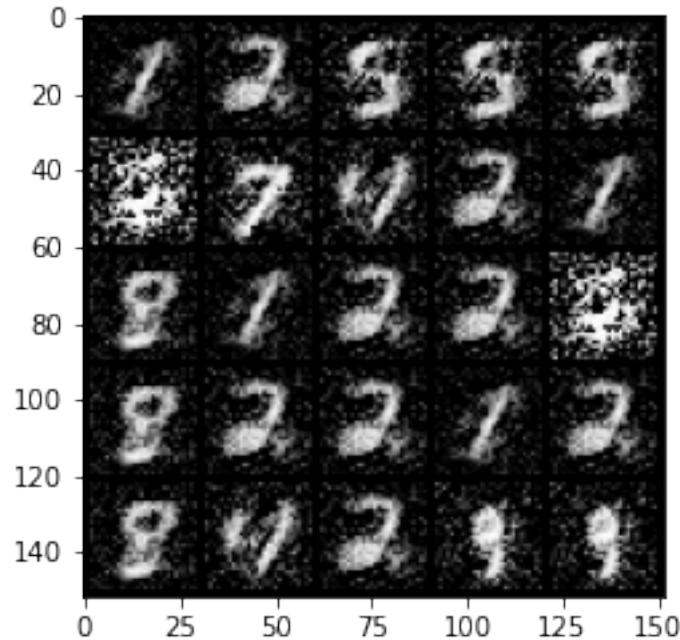
Epoch 386, step 181500 -> generator loss: 0.47545616078376723, discriminator loss: 0.654483105540276

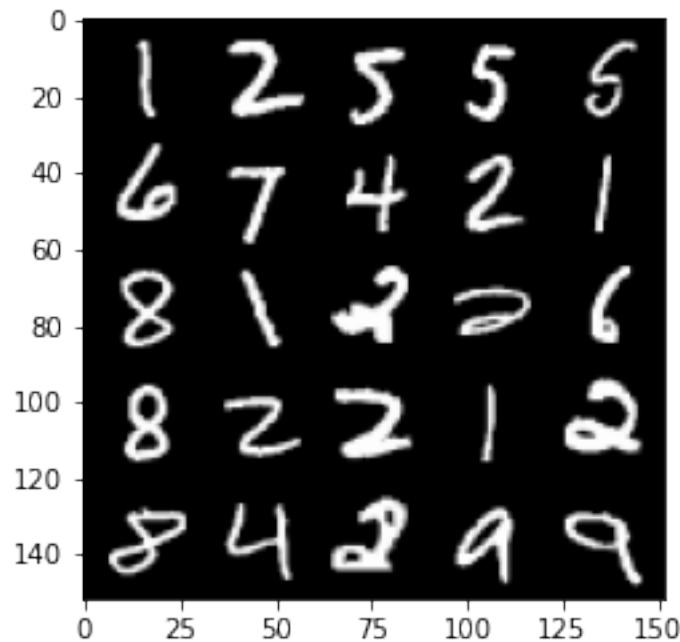




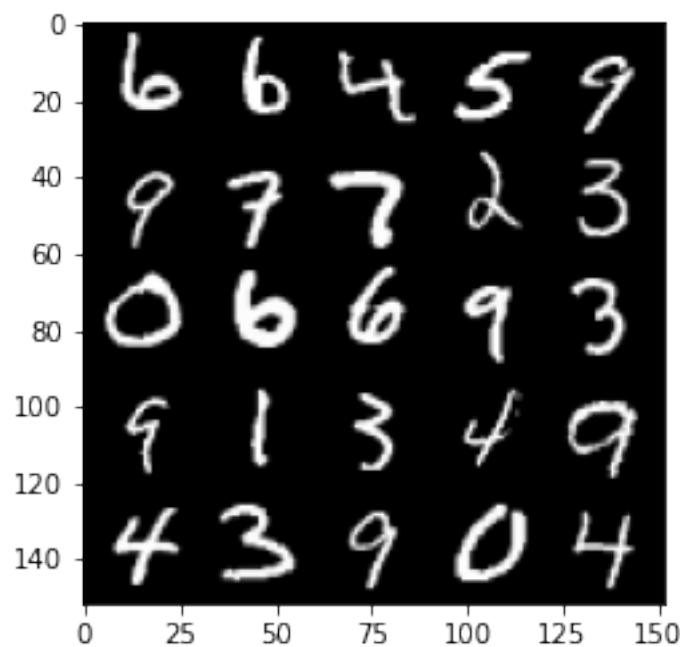
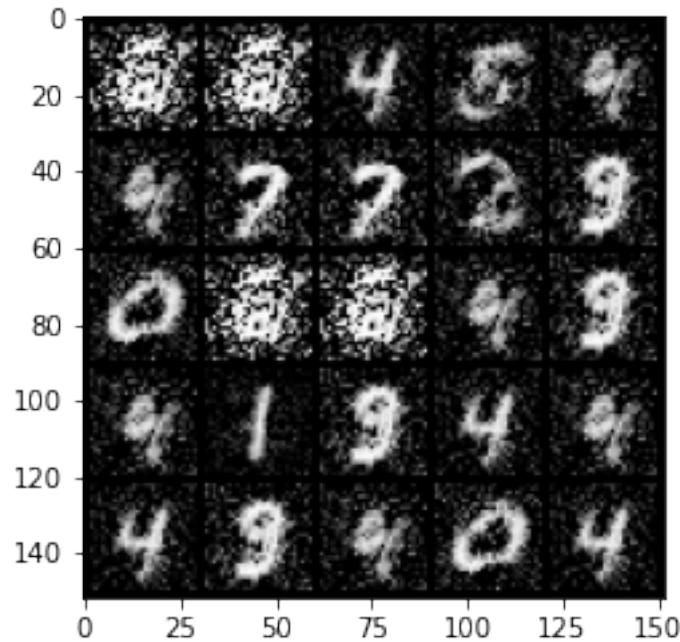
```
100%|    | 469/469 [00:13<00:00, 34.69it/s]
100%|    | 469/469 [00:13<00:00, 34.38it/s]
 6%|    | 27/469 [00:00<00:12, 35.79it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 388, step 182000 -> generator loss: 0.4873953910470005, discriminator
loss: 0.6449729980230334
```





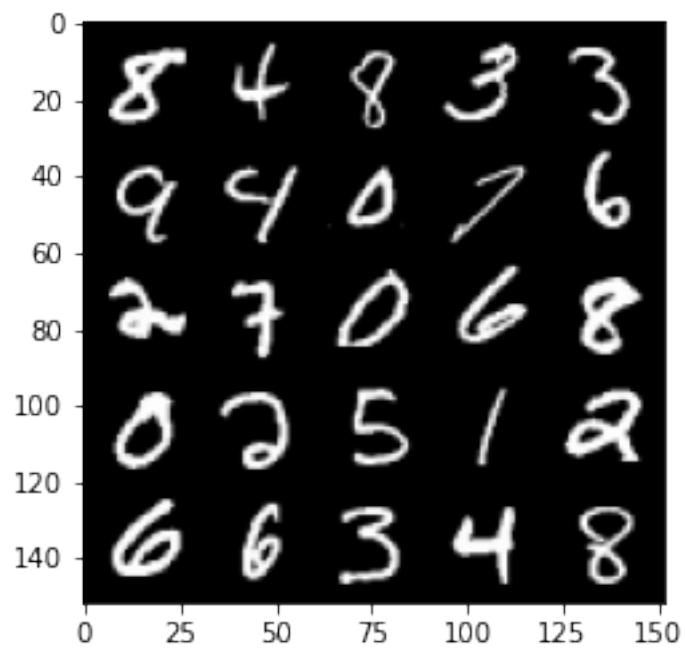
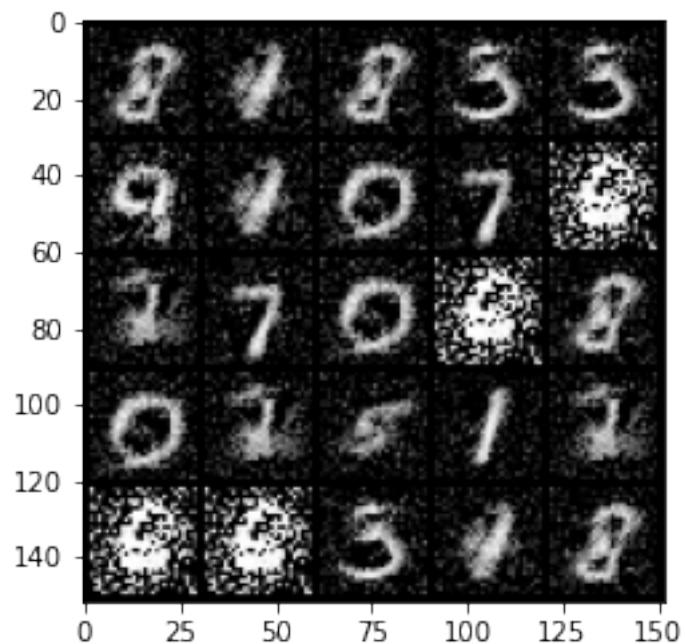
```
100%| 469/469 [00:13<00:00, 34.15it/s]
13%| 59/469 [00:01<00:11, 36.02it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 389, step 182500 -> generator loss: 0.4745807493329045, discriminator
loss: 0.6706358580589293
```



```
100%| 469/469 [00:13<00:00, 34.16it/s]
19%| 87/469 [00:02<00:10, 35.75it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 390, step 183000 -> generator loss: 0.46011439388990366, discriminator

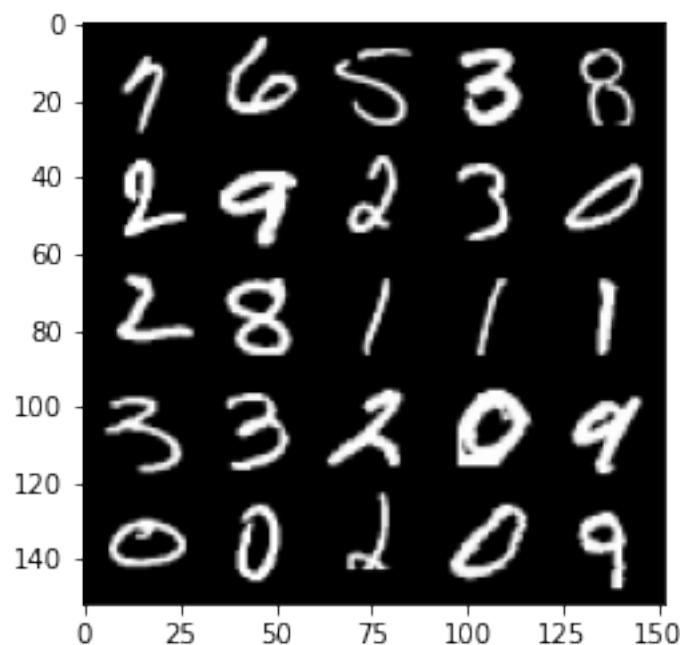
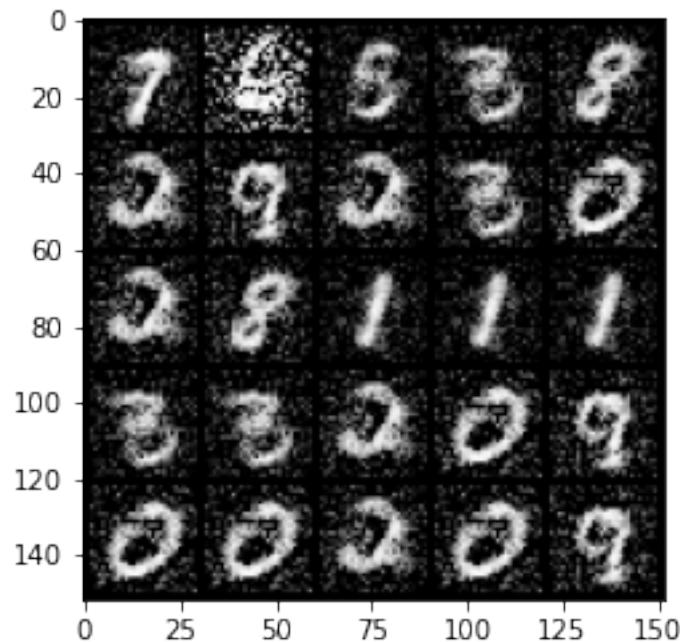
loss: 0.6877406404018409



100% | 469/469 [00:13<00:00, 34.25it/s]  
25% | 118/469 [00:03<00:09, 35.87it/s] Clipping input data to the

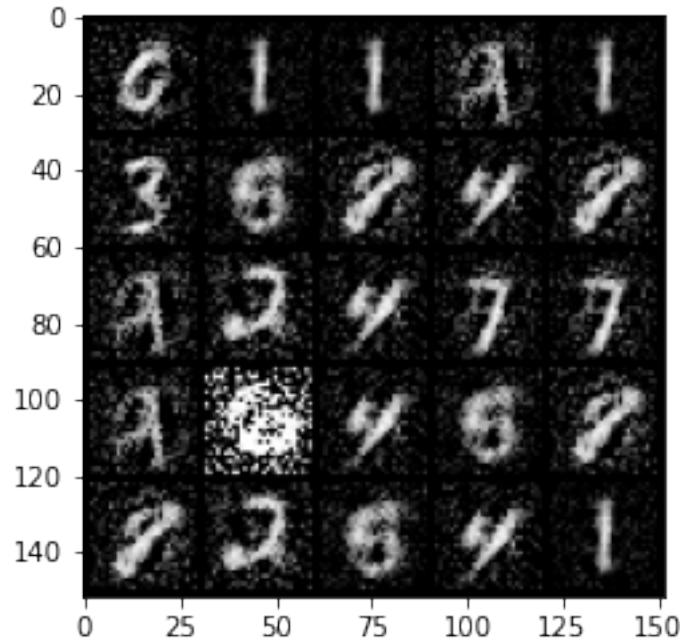
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

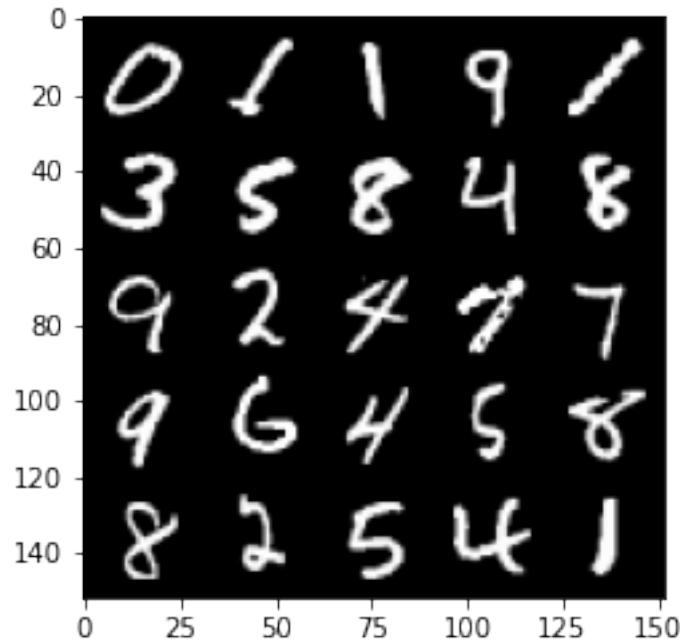
Epoch 391, step 183500 -> generator loss: 0.4728271135687823, discriminator loss: 0.6611667370796201



```
100%|      | 469/469 [00:13<00:00, 34.36it/s]
32%|      | 152/469 [00:04<00:08, 35.76it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

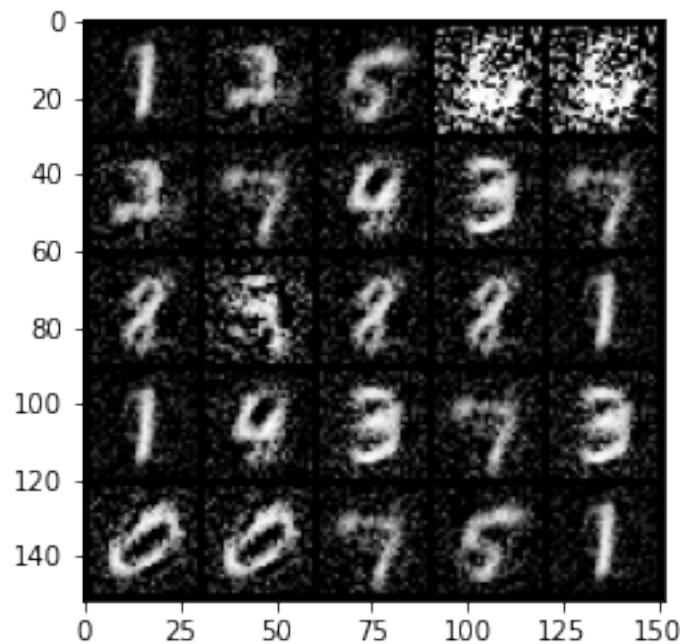
Epoch 392, step 184000 -> generator loss: 0.4853118112683299, discriminator  
loss: 0.6447294323444366

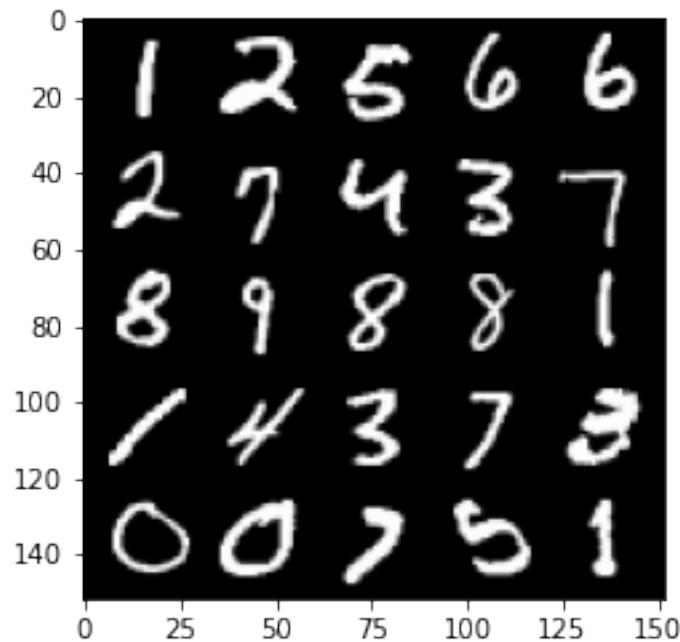




```
100%|      | 469/469 [00:13<00:00, 34.45it/s]
38%|      | 180/469 [00:05<00:07, 36.70it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

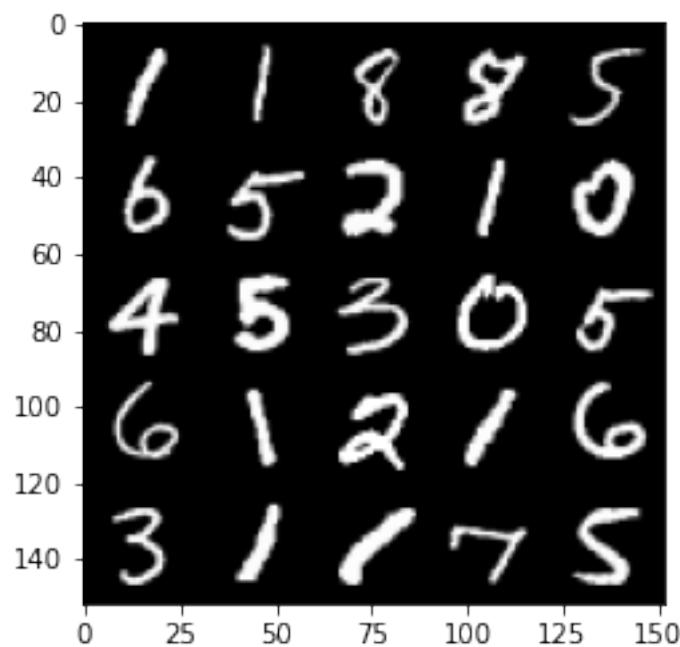
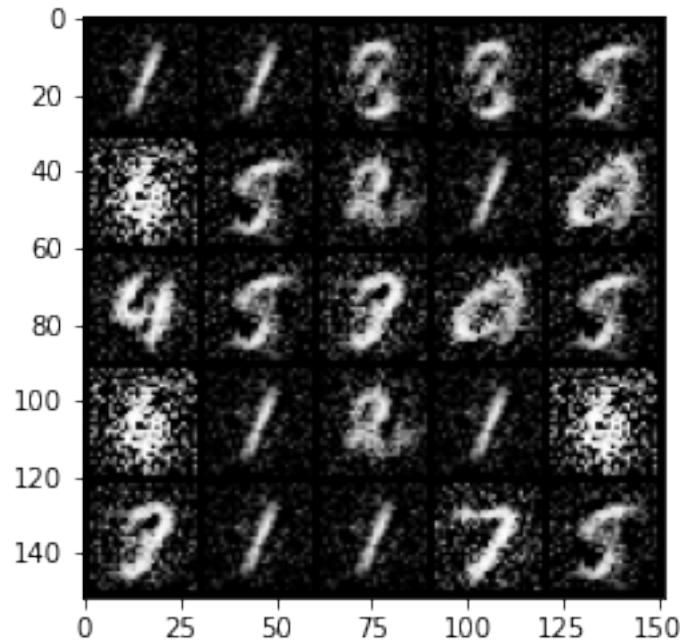
Epoch 393, step 184500 -> generator loss: 0.4825234152078632, discriminator loss: 0.6537347774505617





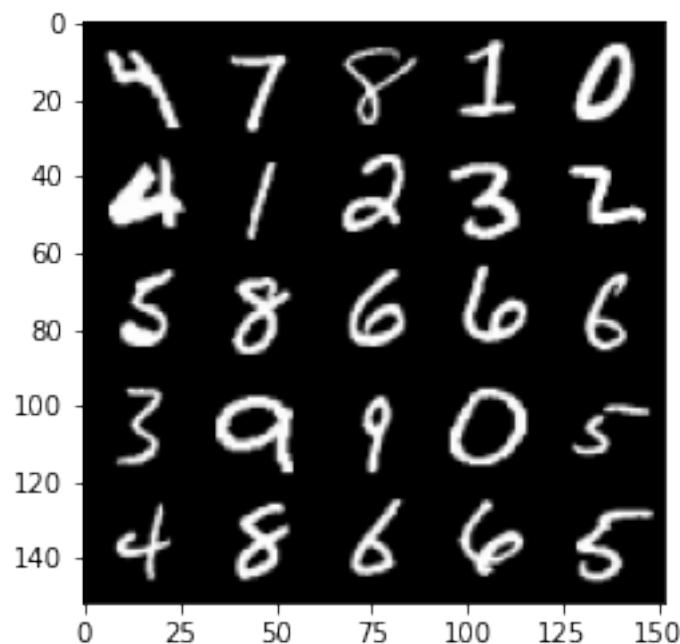
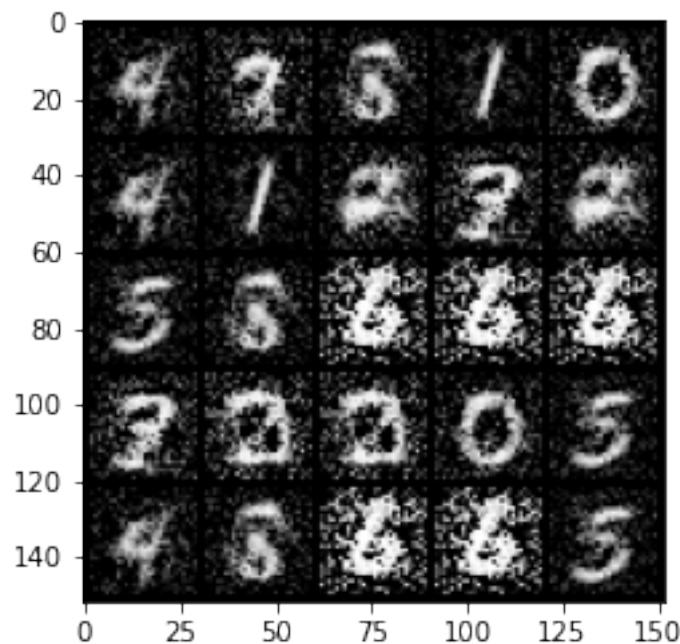
```
100% | 469/469 [00:13<00:00, 34.90it/s]
45% | 211/469 [00:05<00:07, 36.37it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 394, step 185000 -> generator loss: 0.46874001967906925, discriminator loss: 0.6837980499267576



```
100%|      | 469/469 [00:13<00:00, 34.40it/s]
52%|      | 243/469 [00:06<00:06, 36.57it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

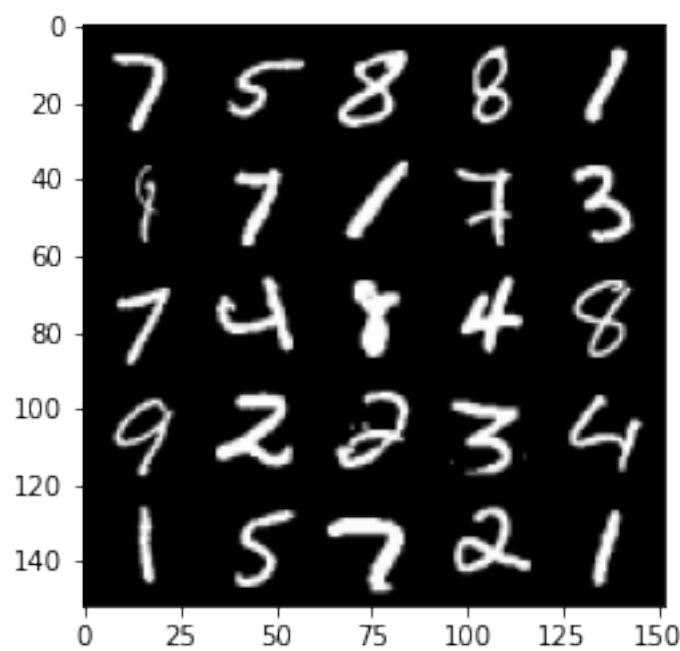
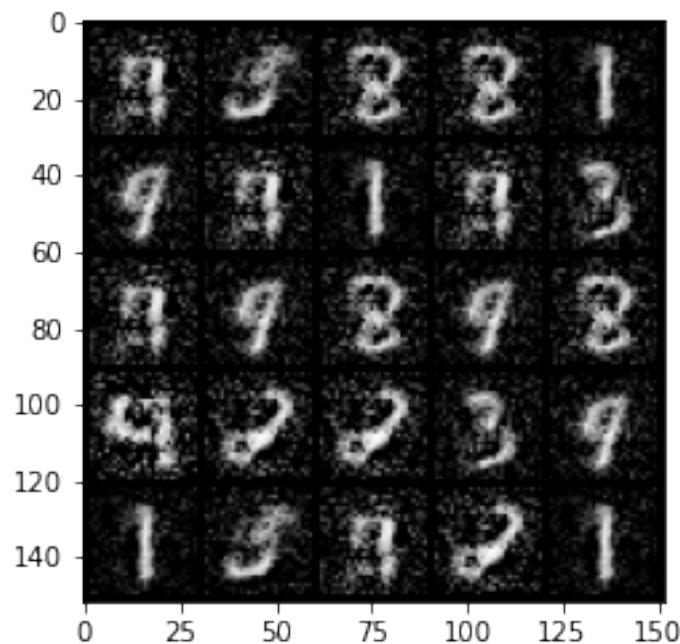
Epoch 395, step 185500 -> generator loss: 0.491917568862438, discriminator loss: 0.632578581094742



100% | 469/469 [00:13<00:00, 34.60it/s]

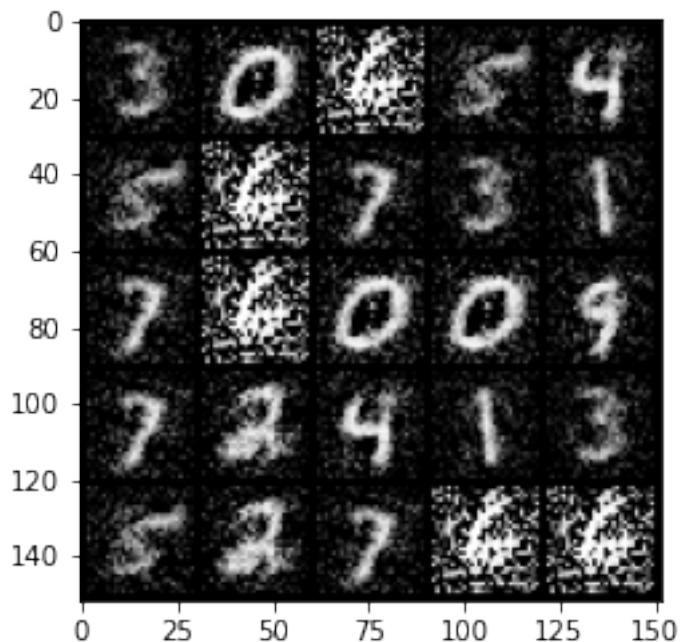
59%| 276/469 [00:07<00:05, 35.59it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

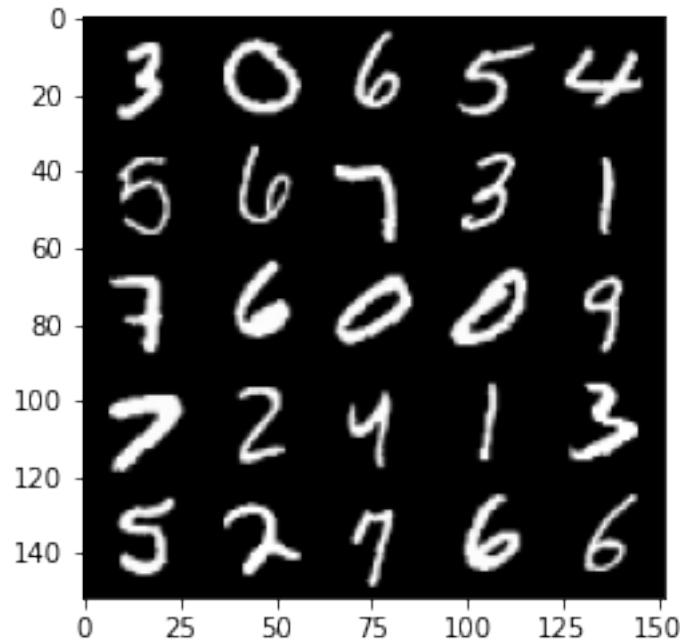
Epoch 396, step 186000 -> generator loss: 0.4888452174067495, discriminator loss: 0.6437725640535363



```
100%|      | 469/469 [00:13<00:00, 34.02it/s]
65%|      | 307/469 [00:08<00:04, 35.77it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

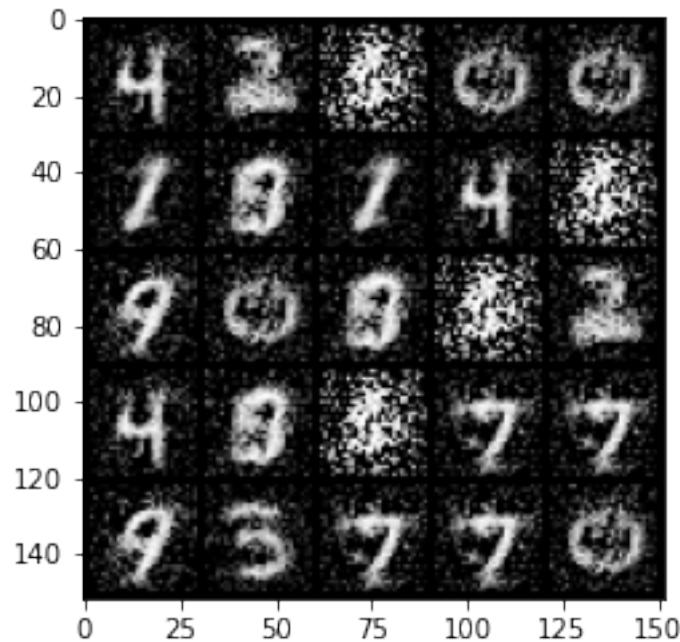
Epoch 397, step 186500 -> generator loss: 0.4765511445999147, discriminator loss: 0.6633400615453714

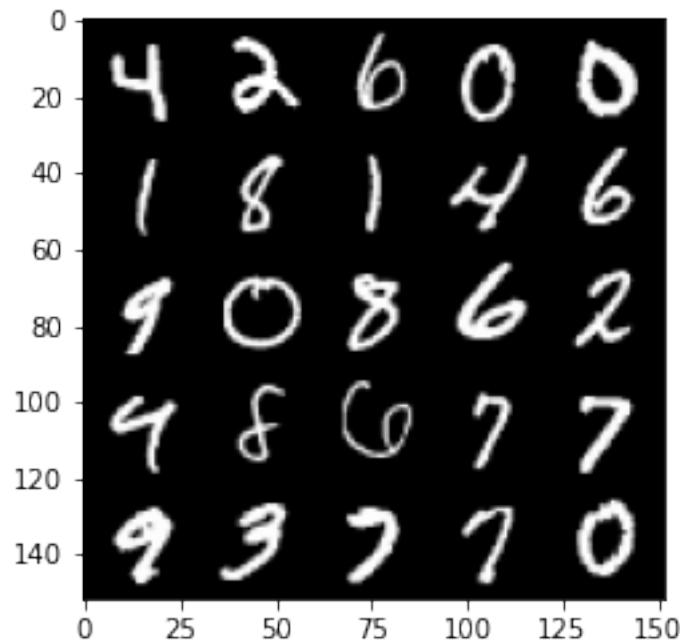




```
100%|      | 469/469 [00:13<00:00, 34.42it/s]
71%|      | 335/469 [00:09<00:03, 36.53it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

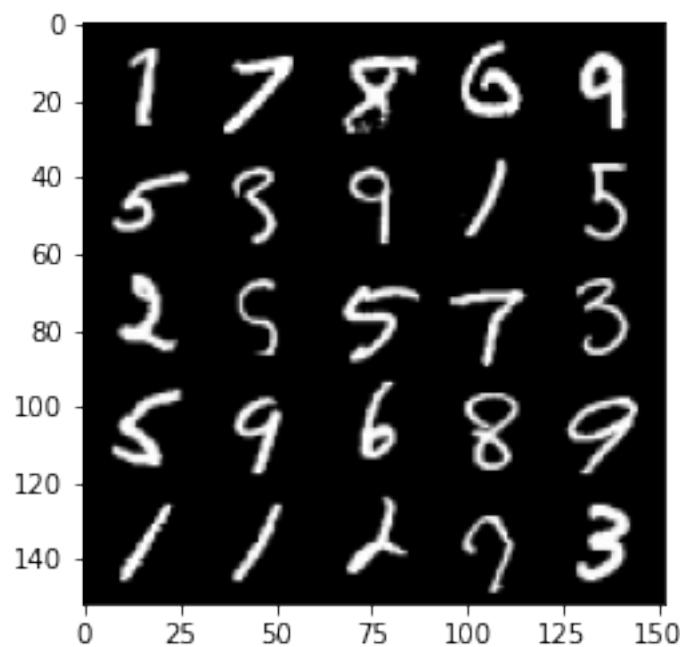
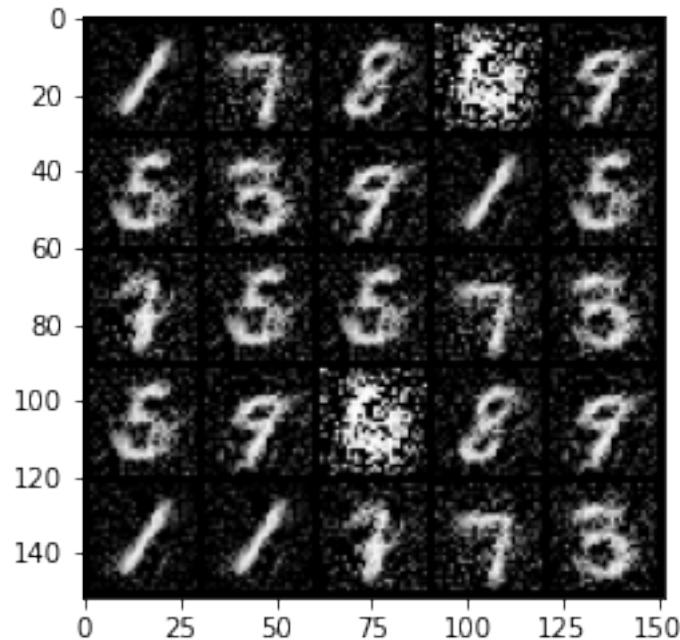
```
Epoch 398, step 187000 -> generator loss: 0.4740830872058868, discriminator
loss: 0.6657761690616603
```





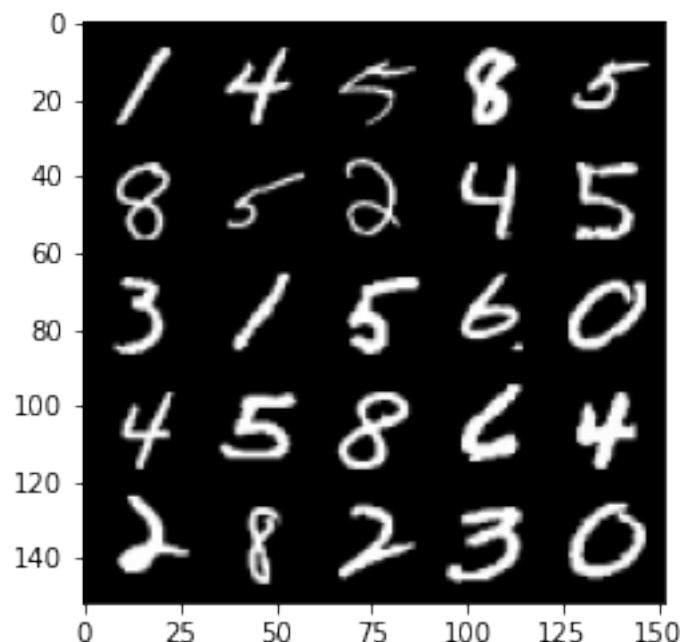
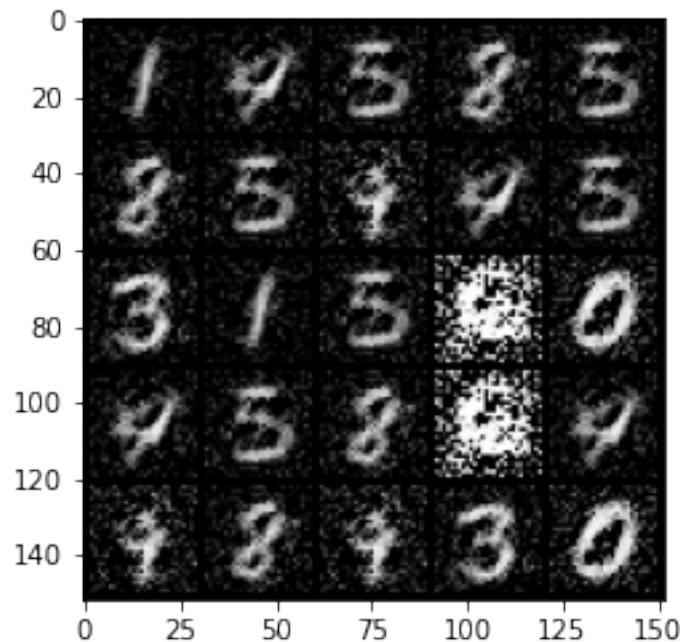
```
100%| 469/469 [00:13<00:00, 34.51it/s]
78%| 368/469 [00:10<00:02, 36.68it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 399, step 187500 -> generator loss: 0.4598846114873888, discriminator
loss: 0.683124809980392
```



100% | 469/469 [00:13<00:00, 34.50it/s]  
85% | 399/469 [00:11<00:01, 35.98it/s] Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).

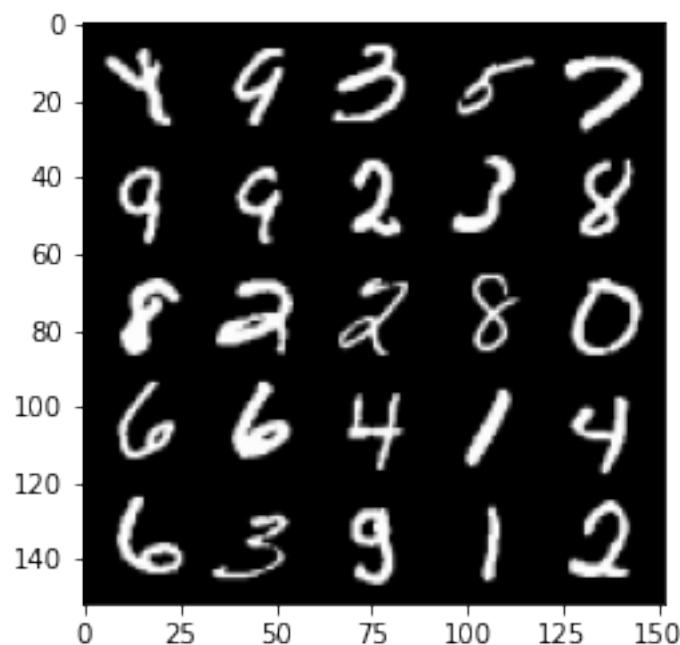
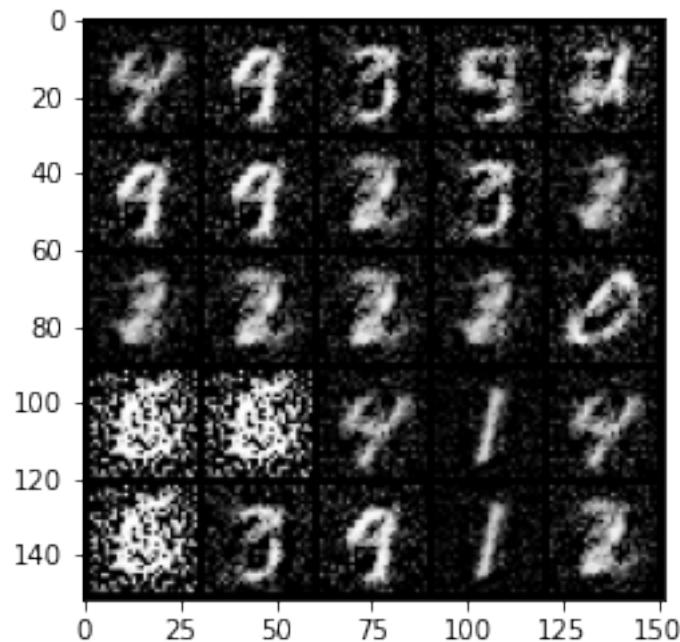
Epoch 400, step 188000 -> generator loss: 0.48345343512296707, discriminator loss: 0.64713250541687



100% | 469/469 [00:13<00:00, 34.24it/s]

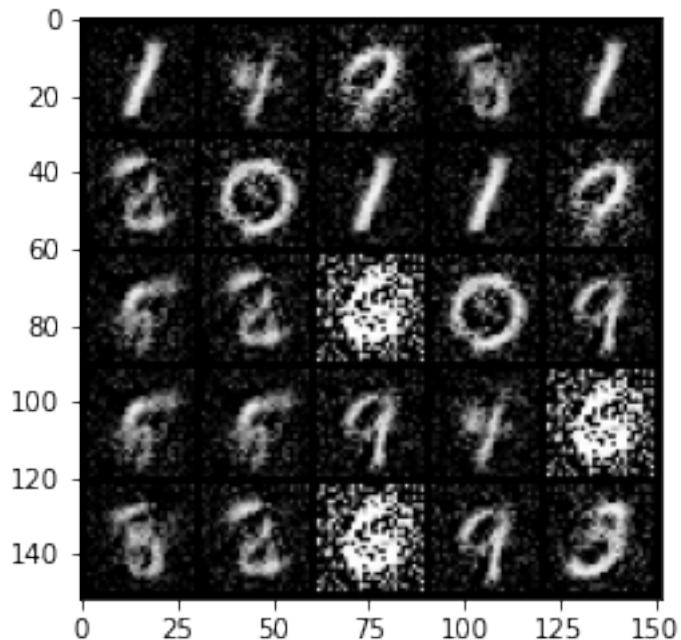
92%| 430/469 [00:12<00:01, 36.06it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

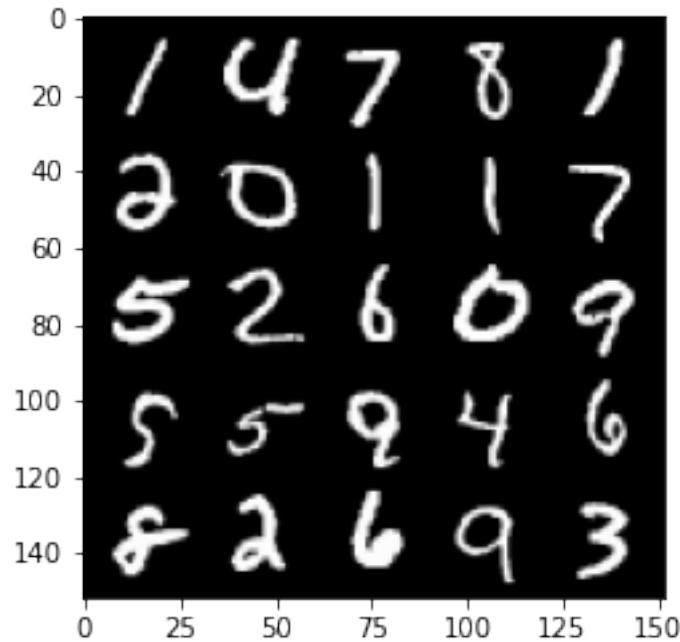
Epoch 401, step 188500 -> generator loss: 0.48704203319549544, discriminator loss: 0.6494641581773755



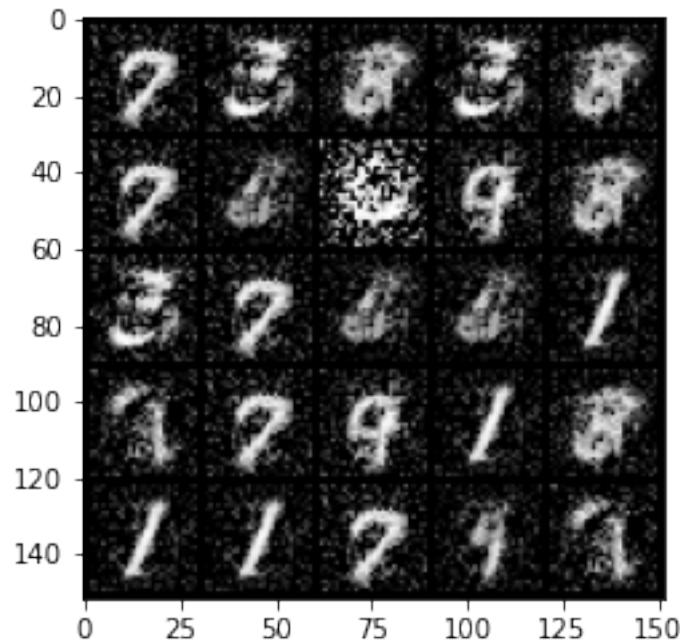
```
100%| 469/469 [00:13<00:00, 34.01it/s]
98%| 459/469 [00:12<00:00, 35.81it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

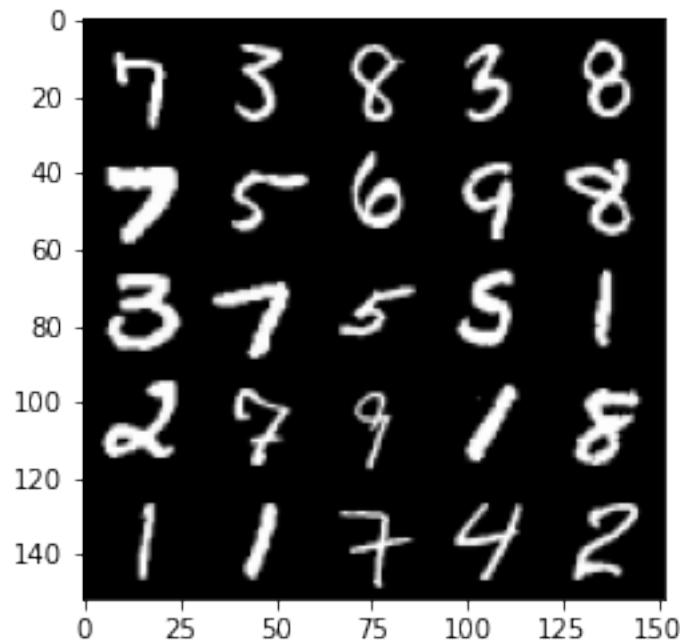
```
Epoch 402, step 189000 -> generator loss: 0.4841509975194924, discriminator
loss: 0.6454159324169155
```





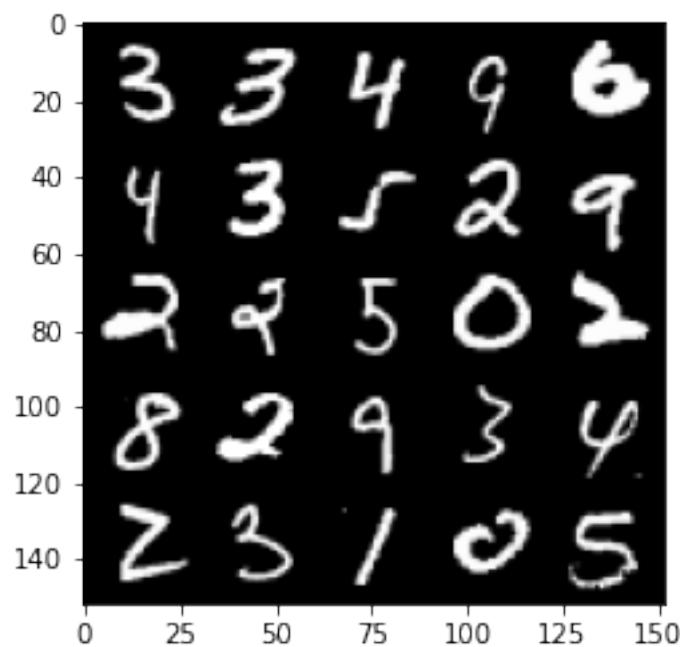
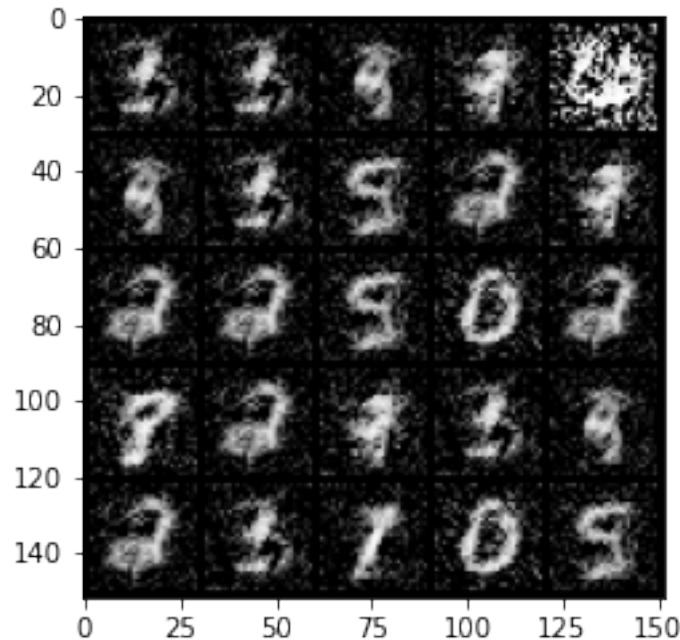
```
100%| 469/469 [00:13<00:00, 34.43it/s]
100%| 469/469 [00:13<00:00, 35.41it/s]
 5%| 23/469 [00:00<00:12, 35.09it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 404, step 189500 -> generator loss: 0.48132980394363445, discriminator
loss: 0.6483209757804866
```





```
100%| 469/469 [00:13<00:00, 34.44it/s]
11%| 52/469 [00:01<00:11, 36.27it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

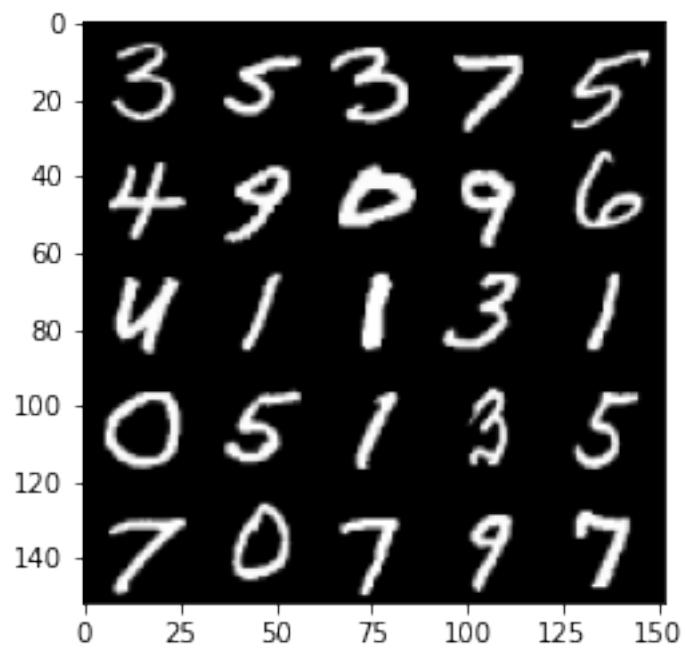
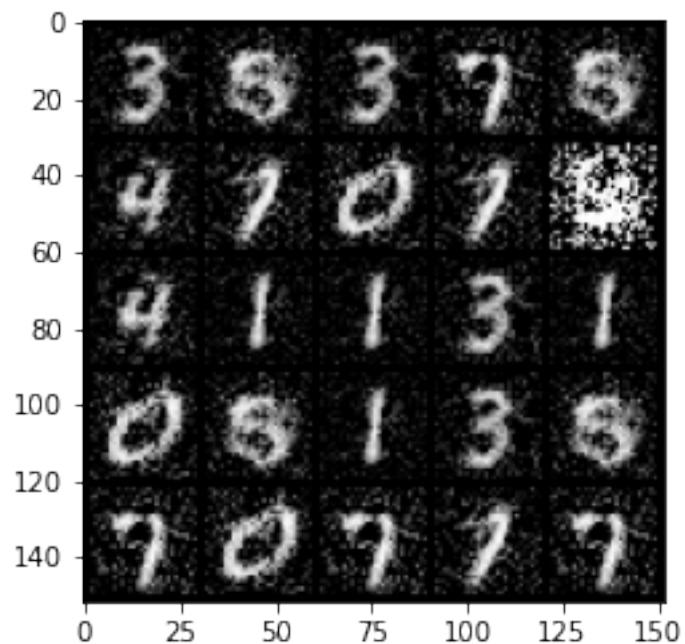
```
Epoch 405, step 190000 -> generator loss: 0.4802672943472857, discriminator
loss: 0.6558542250394822
```



100% | 469/469 [00:13<00:00, 34.47it/s]  
18% | 83/469 [00:02<00:10, 36.09it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 406, step 190500 -> generator loss: 0.4790636380910871, discriminator

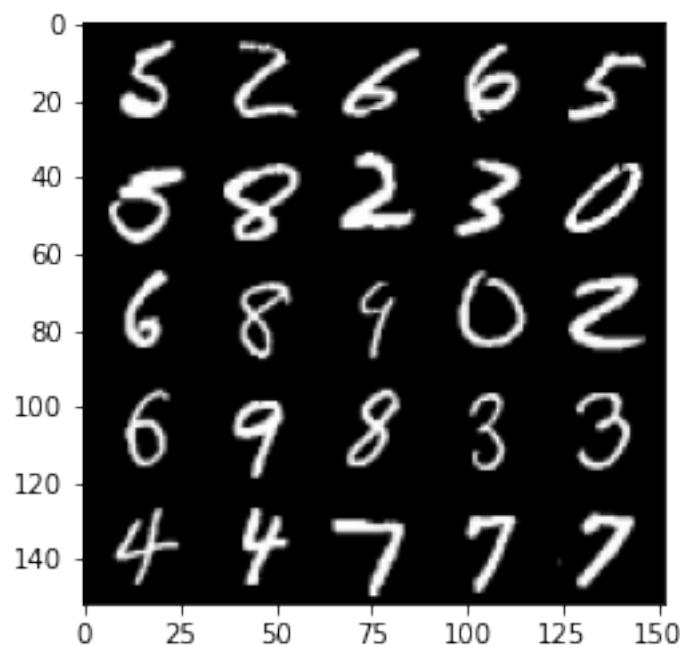
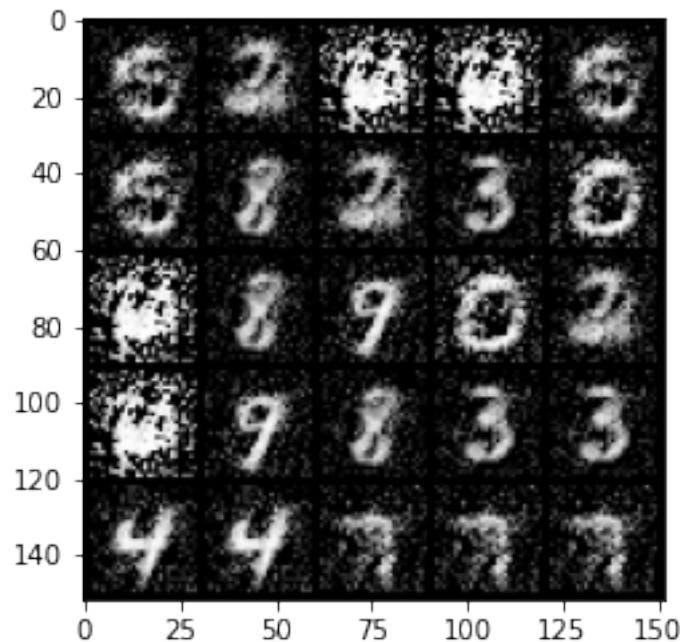
loss: 0.655514825344086



100% | 469/469 [00:13<00:00, 34.15it/s]  
25% | 116/469 [00:03<00:09, 36.05it/s] Clipping input data to the

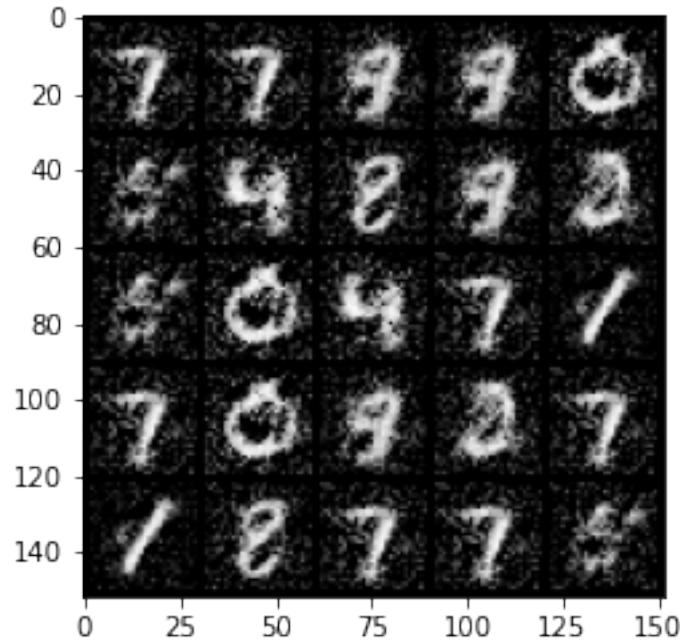
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

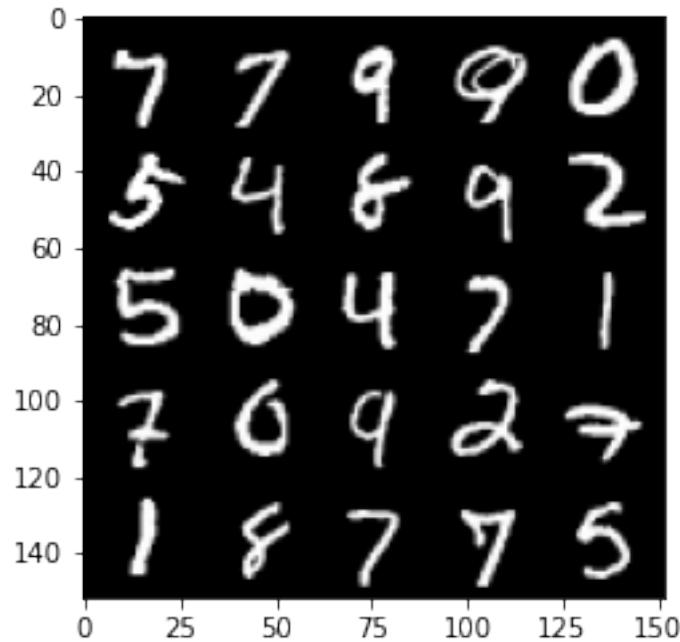
Epoch 407, step 191000 -> generator loss: 0.48302761995792387, discriminator loss: 0.6493501629829403



```
100%|    | 469/469 [00:13<00:00, 34.68it/s]
32%|    | 148/469 [00:04<00:10, 29.57it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

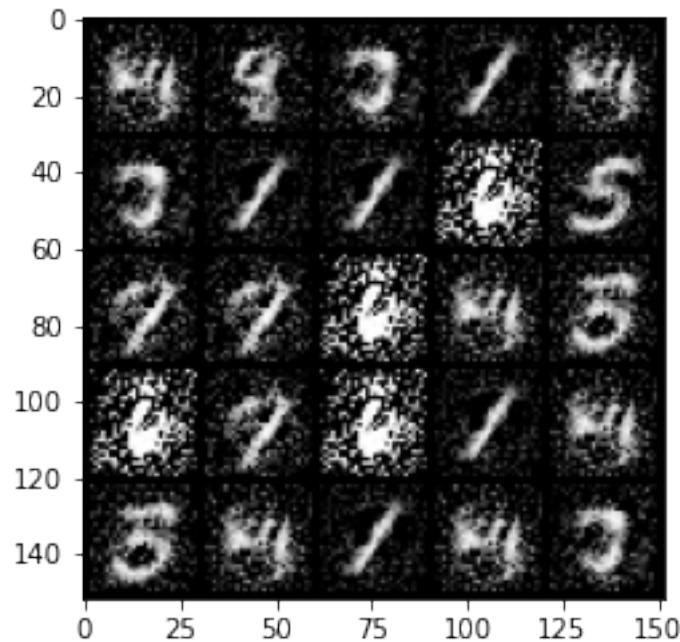
Epoch 408, step 191500 -> generator loss: 0.4777918490171432, discriminator  
loss: 0.66118392598629

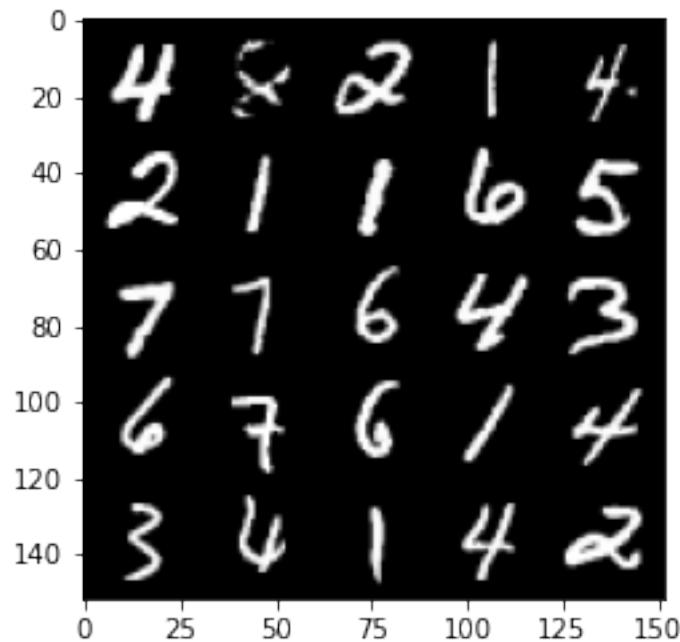




```
100%|      | 469/469 [00:15<00:00, 30.82it/s]
38%|      | 178/469 [00:05<00:08, 33.59it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

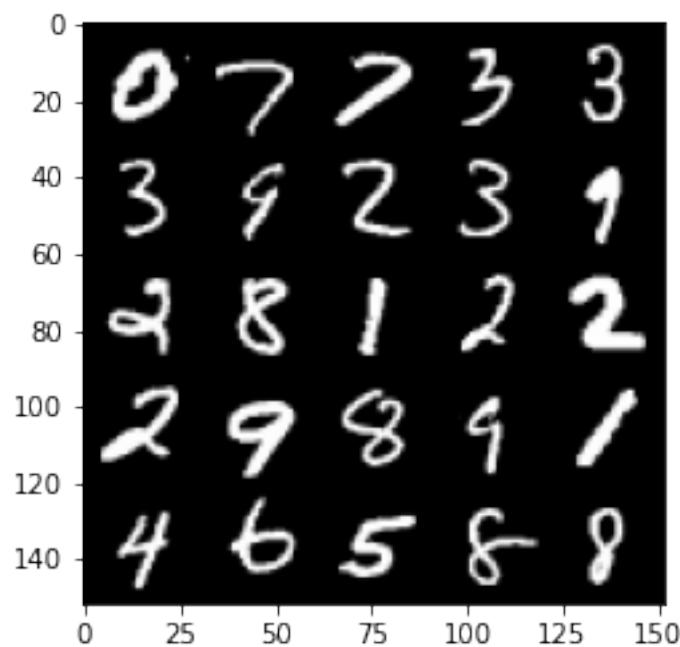
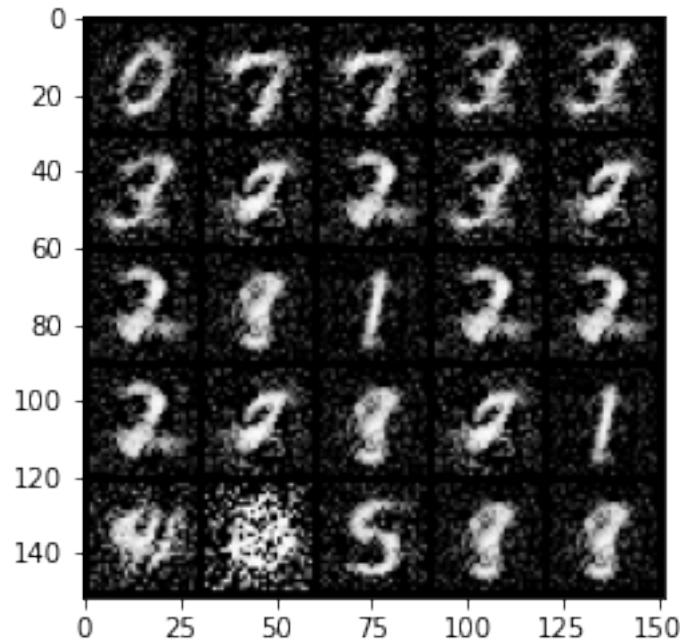
Epoch 409, step 192000 -> generator loss: 0.48135195416212073, discriminator loss: 0.6583057067394262





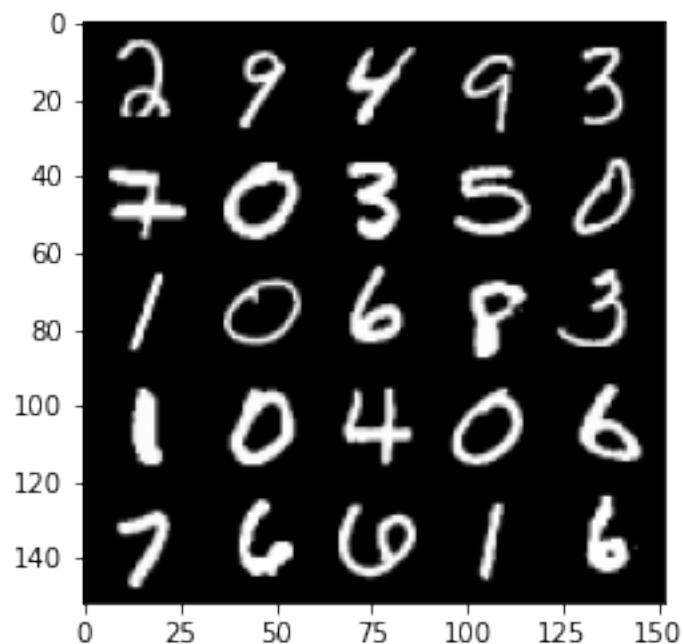
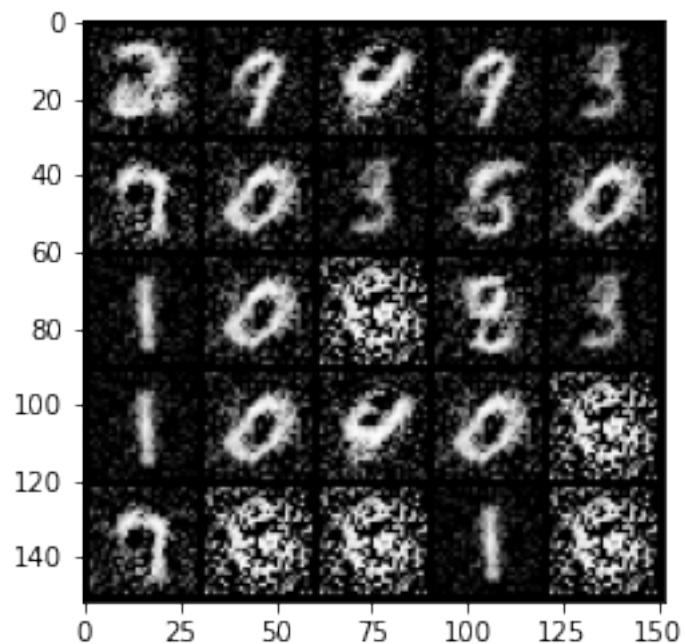
```
100% | 469/469 [00:14<00:00, 32.64it/s]
45% | 210/469 [00:05<00:07, 36.30it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 410, step 192500 -> generator loss: 0.4842221360802653, discriminator
loss: 0.6553322190046303
```



```
100%|      | 469/469 [00:13<00:00, 34.35it/s]
51%|      | 239/469 [00:06<00:06, 34.71it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

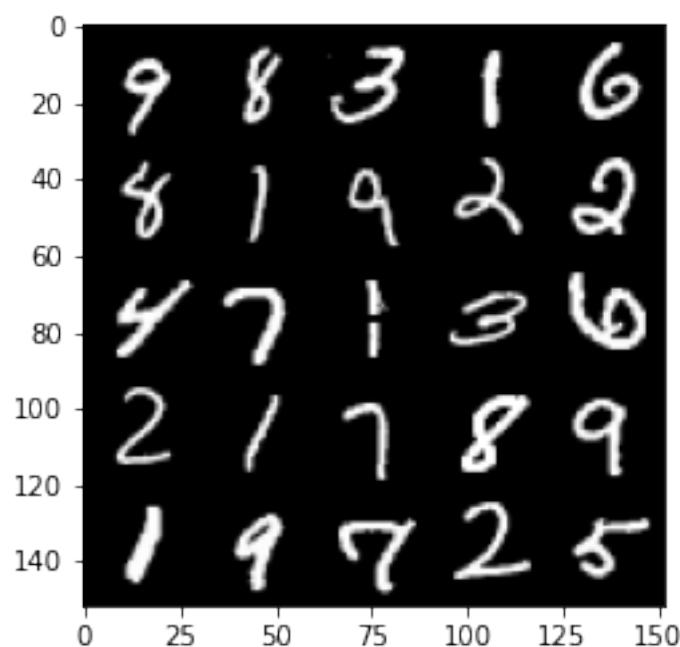
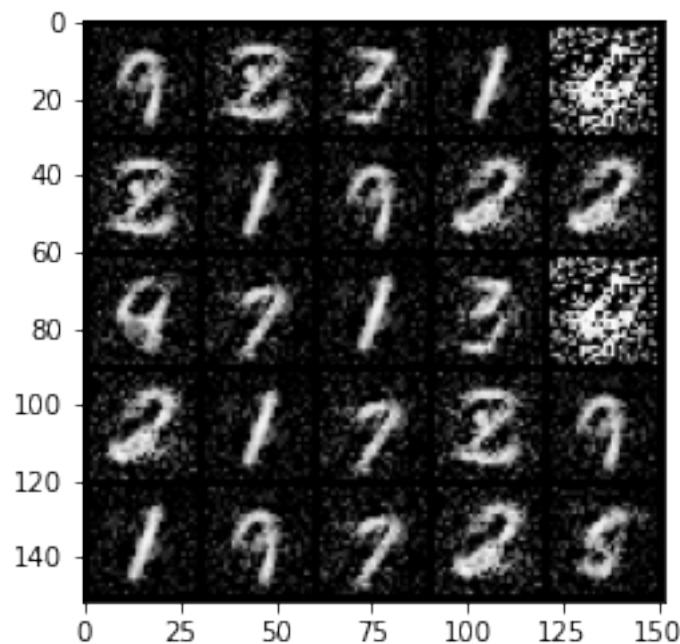
Epoch 411, step 193000 -> generator loss: 0.4862651377320292, discriminator loss: 0.6535605980157857



100% | 469/469 [00:13<00:00, 34.38it/s]

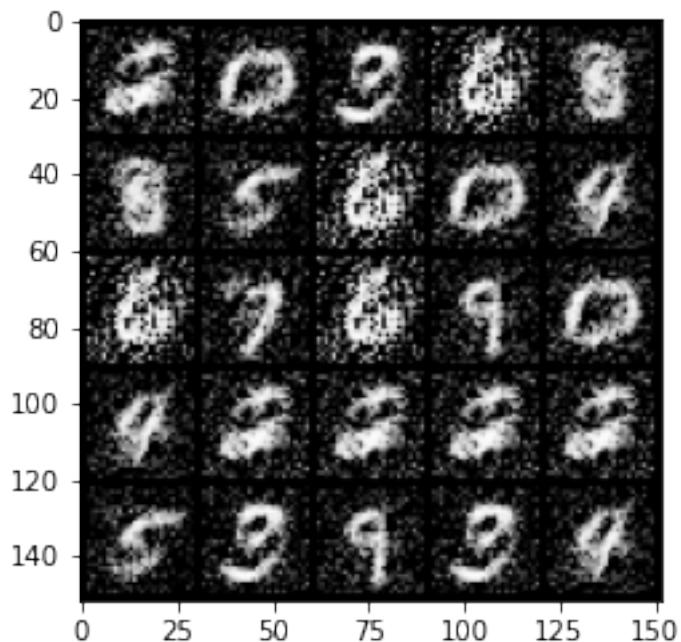
58%| 271/469 [00:07<00:05, 36.15it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

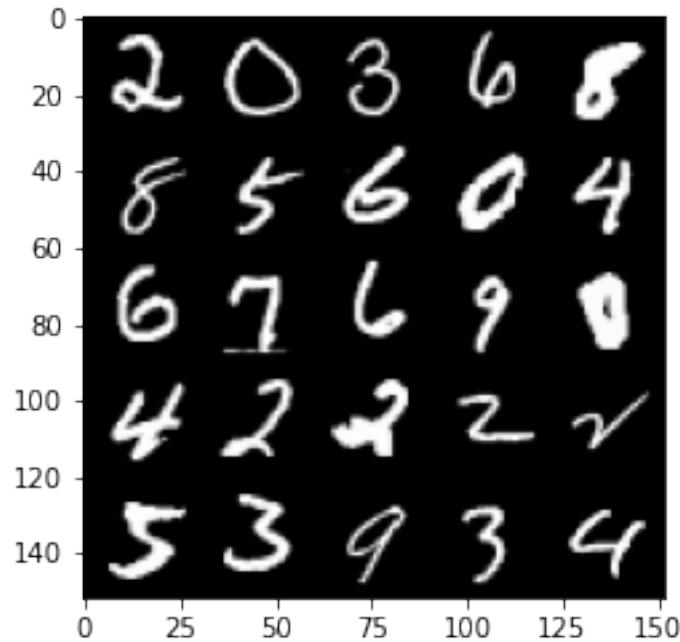
Epoch 412, step 193500 -> generator loss: 0.47489288532733887, discriminator loss: 0.672572264194489



```
100%|      | 469/469 [00:13<00:00, 34.27it/s]
64%|      | 300/469 [00:08<00:04, 35.61it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

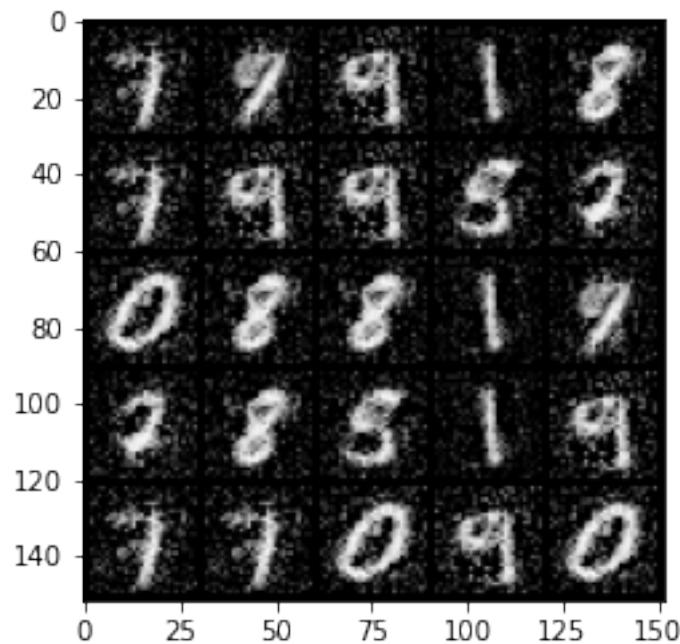
```
Epoch 413, step 194000 -> generator loss: 0.47296489030122774, discriminator
loss: 0.6705479490756989
```

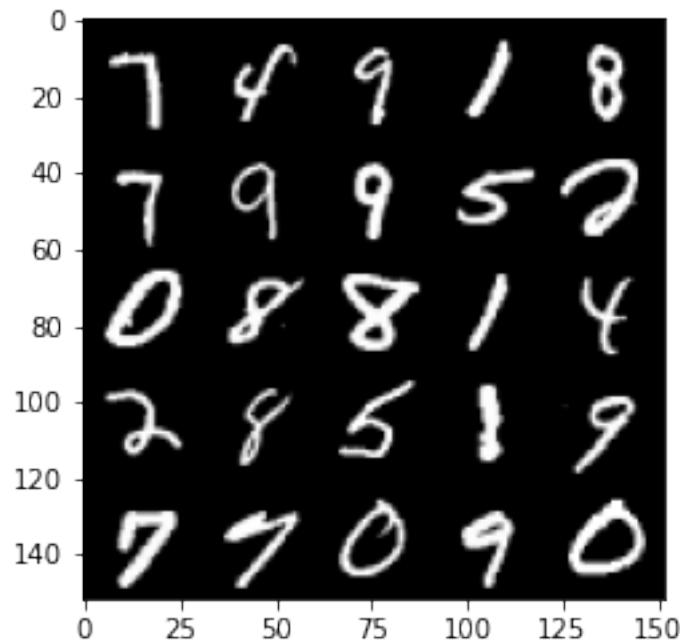




```
100%|      | 469/469 [00:13<00:00, 34.07it/s]
71%|      | 331/469 [00:09<00:03, 35.67it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

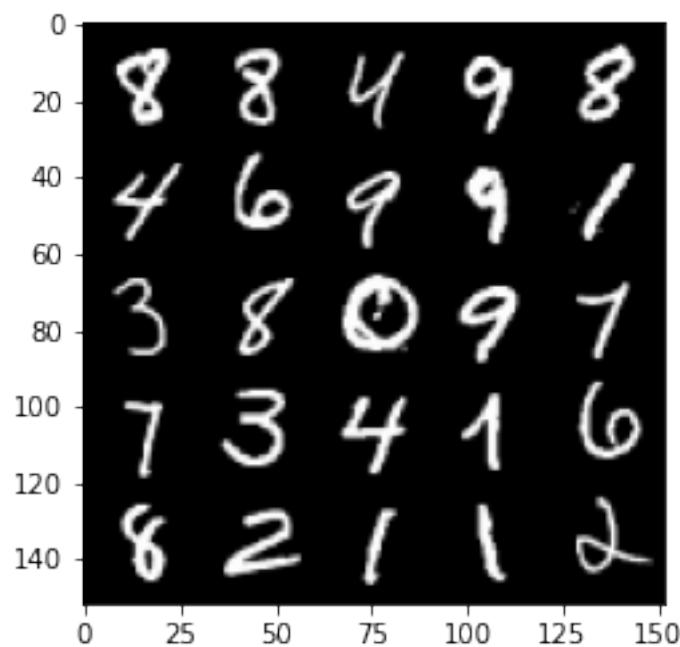
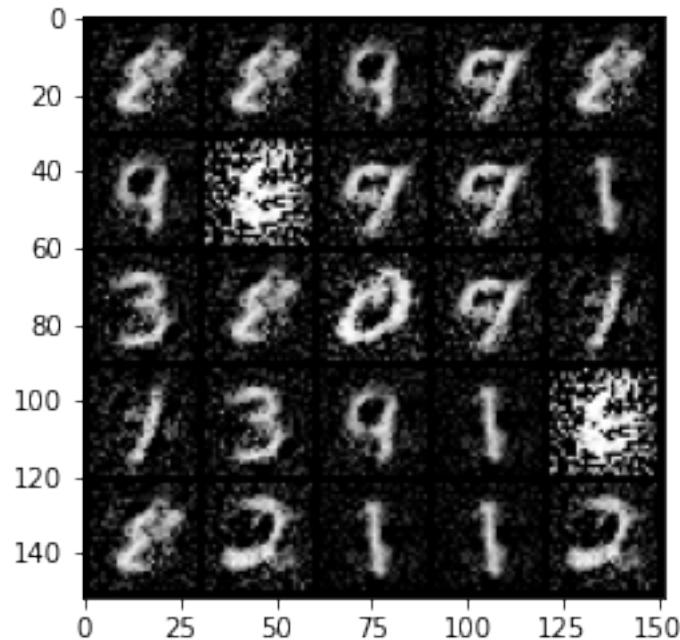
Epoch 414, step 194500 -> generator loss: 0.46647159111499764, discriminator loss: 0.6815040111541761





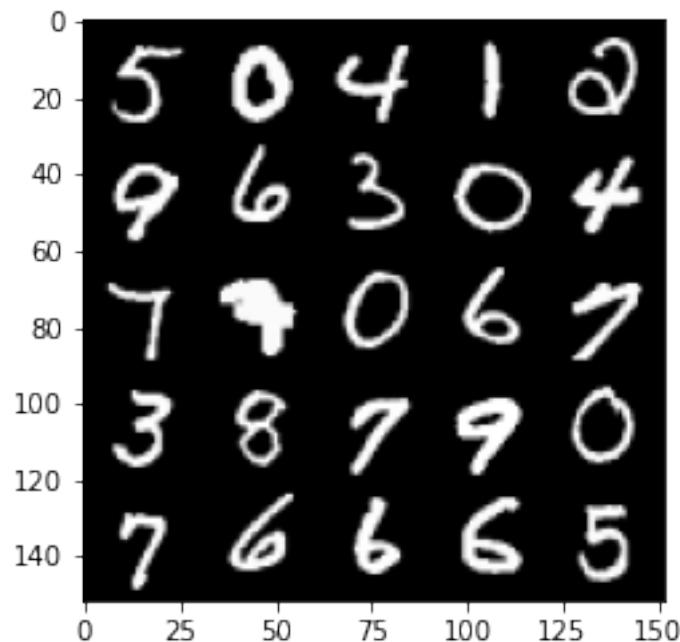
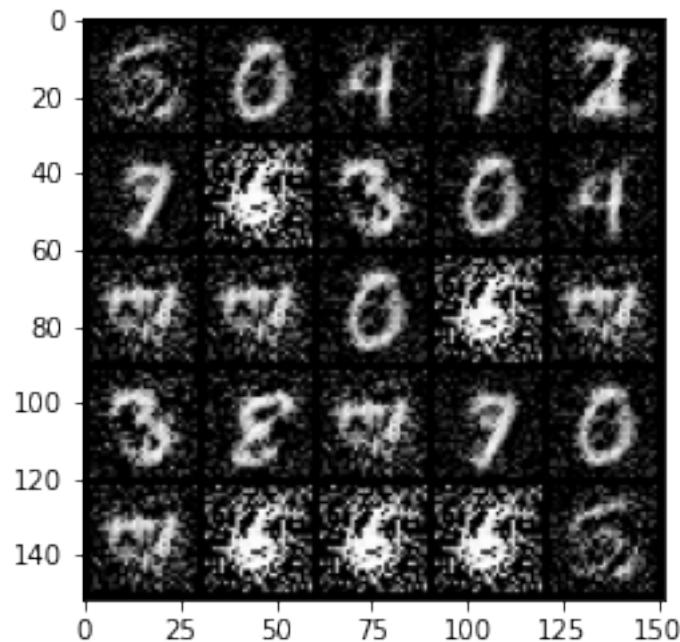
```
100%|      | 469/469 [00:13<00:00, 34.32it/s]
77%|      | 363/469 [00:10<00:02, 36.06it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 415, step 195000 -> generator loss: 0.4772523978352545, discriminator
loss: 0.6612808699607852
```



```
100%|     | 469/469 [00:13<00:00, 34.43it/s]
84%|     | 396/469 [00:11<00:02, 36.39it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

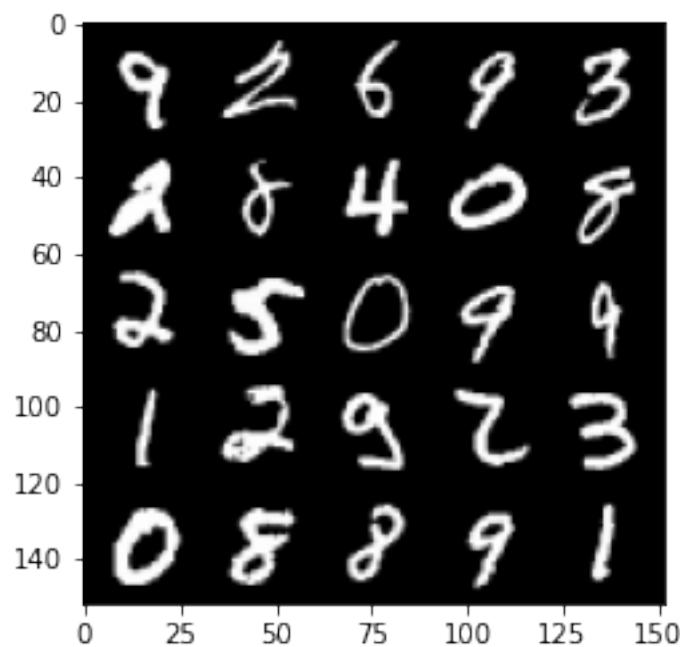
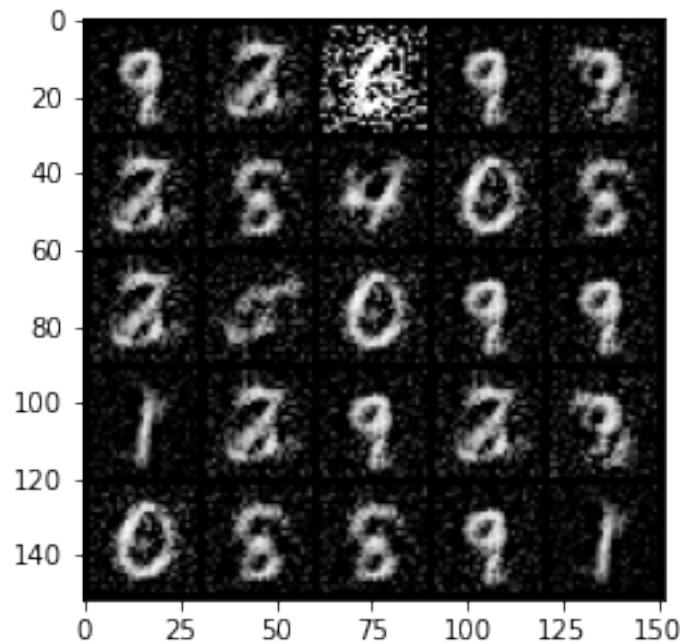
Epoch 416, step 195500 -> generator loss: 0.46588088154792795, discriminator loss: 0.6787671554088598



100% | 469/469 [00:13<00:00, 34.13it/s]

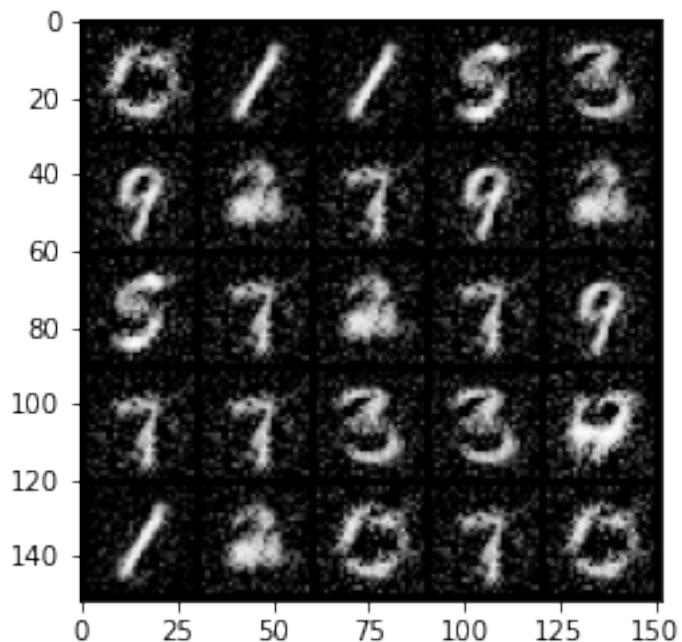
90%| 424/469 [00:11<00:01, 36.50it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

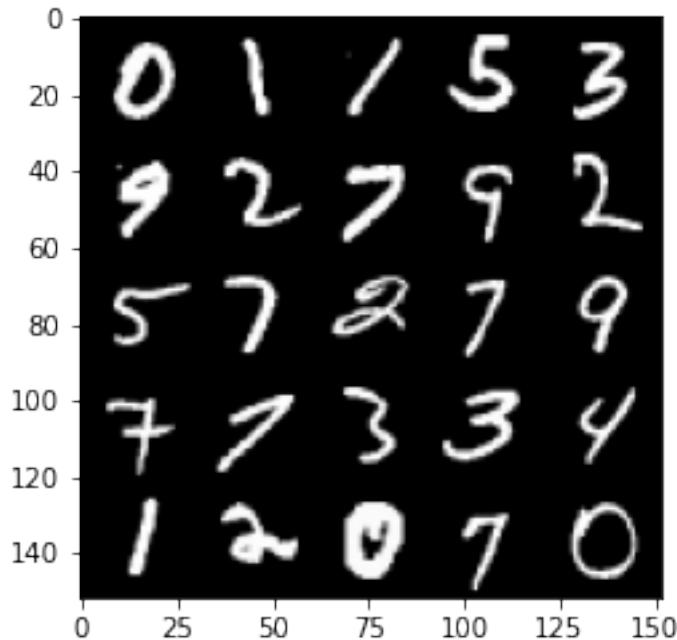
Epoch 417, step 196000 -> generator loss: 0.4800208526253699, discriminator loss: 0.6509089574813842



```
100%|   | 469/469 [00:13<00:00, 34.36it/s]
97%|   | 455/469 [00:12<00:00, 36.23it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

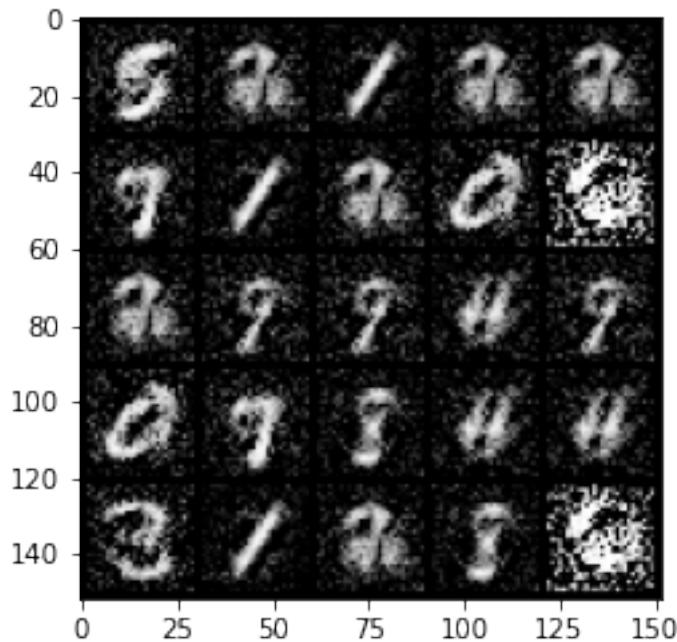
```
Epoch 418, step 196500 -> generator loss: 0.468378141283989, discriminator loss:
0.6791699457168576
```

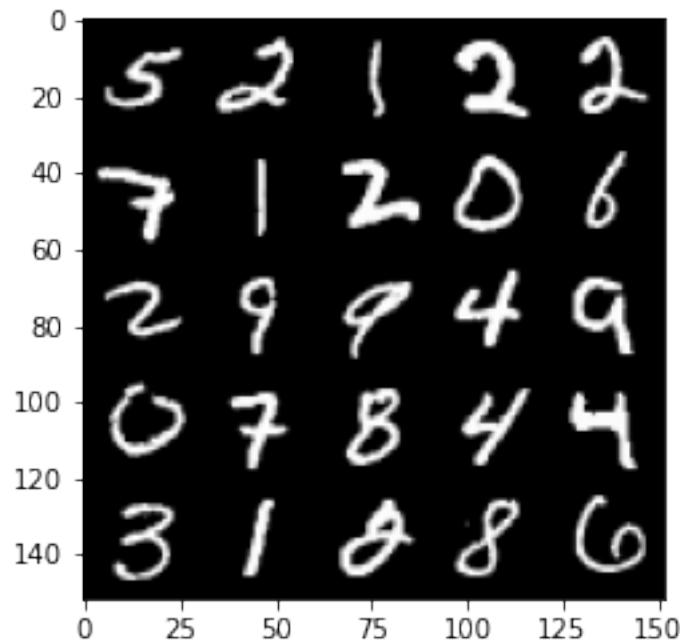




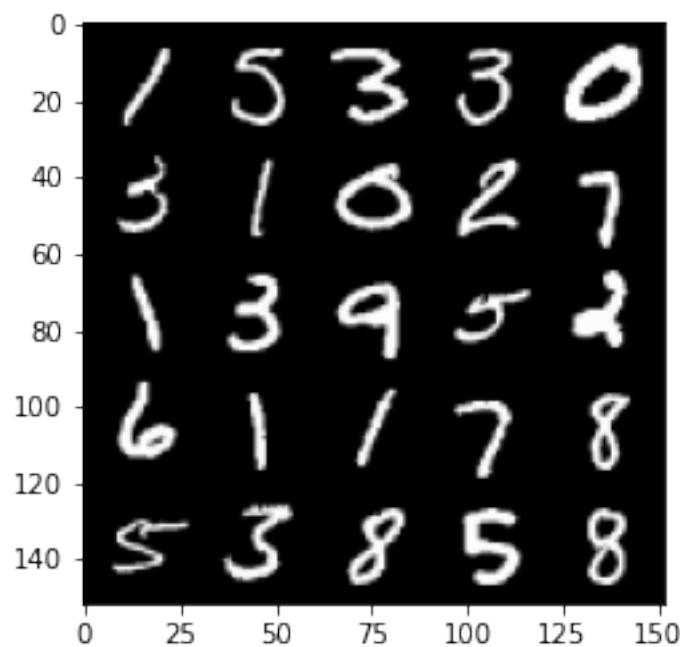
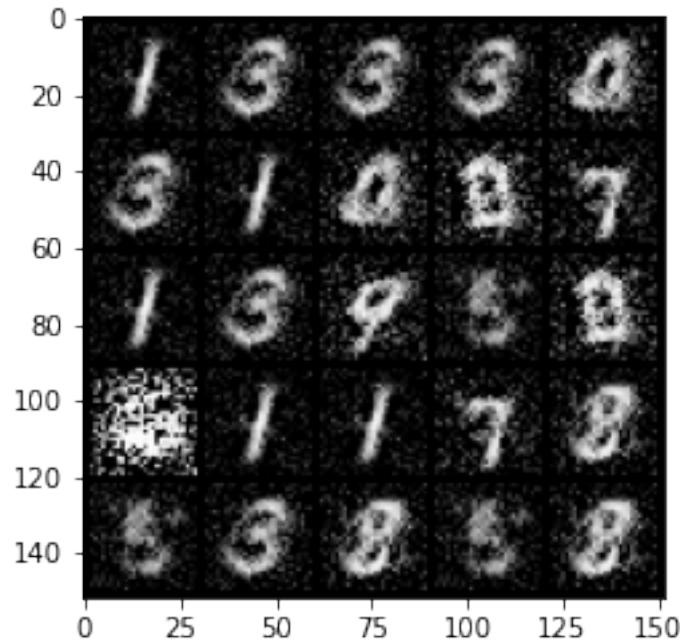
```
100%|   | 469/469 [00:13<00:00, 34.58it/s]
100%|   | 469/469 [00:13<00:00, 35.53it/s]
  4%|   | 19/469 [00:00<00:12, 35.04it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 420, step 197000 -> generator loss: 0.48051749253273, discriminator loss:
0.6560924125909805
```





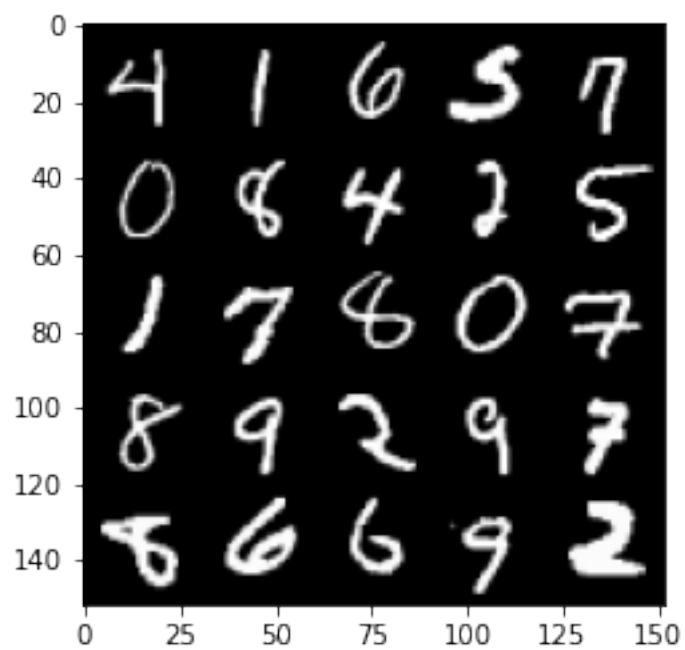
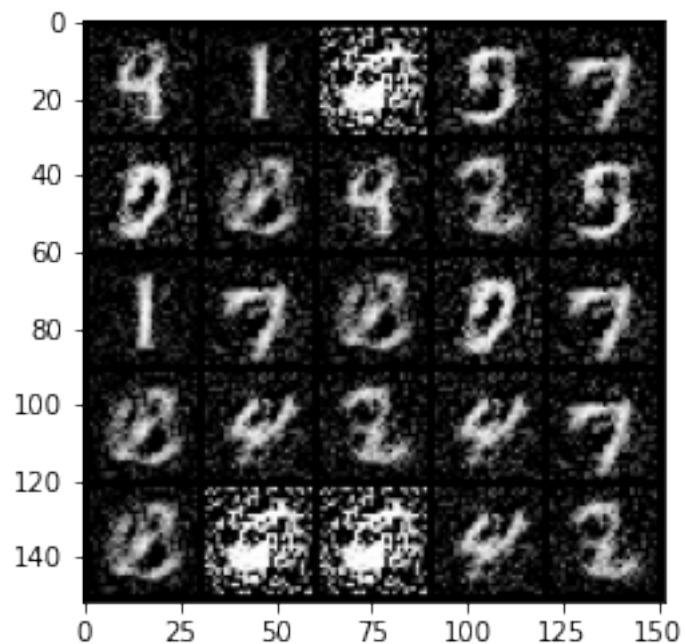
```
100%| 469/469 [00:13<00:00, 34.60it/s]
11%| 50/469 [00:01<00:11, 35.43it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 421, step 197500 -> generator loss: 0.47974916857480987, discriminator
loss: 0.6526200337409964
```



```
100%| 469/469 [00:13<00:00, 34.66it/s]
17%| 79/469 [00:02<00:10, 36.28it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 422, step 198000 -> generator loss: 0.4812602946758273, discriminator

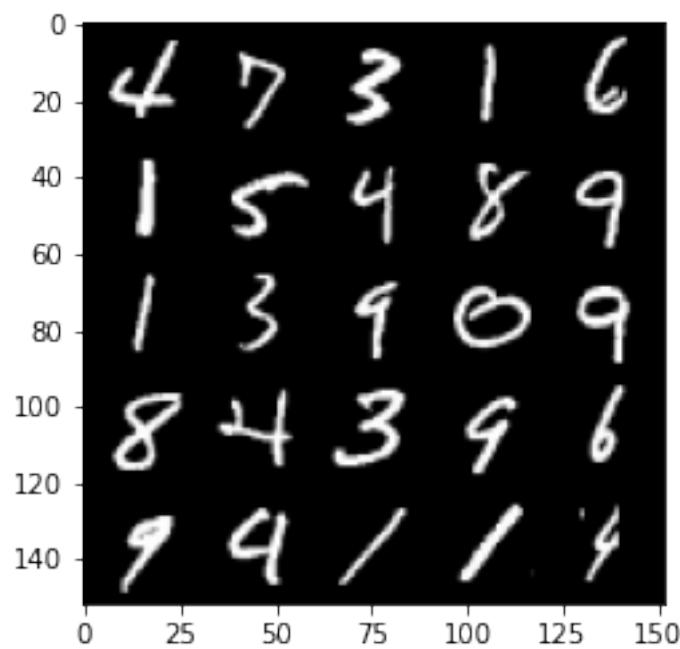
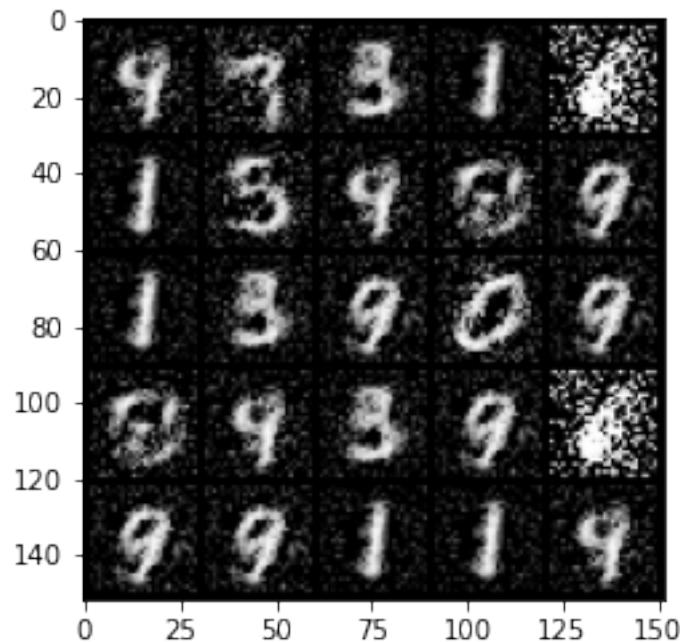
loss: 0.6488546199798588



100% | 469/469 [00:13<00:00, 34.54it/s]  
24% | 112/469 [00:03<00:10, 35.09it/s] Clipping input data to the

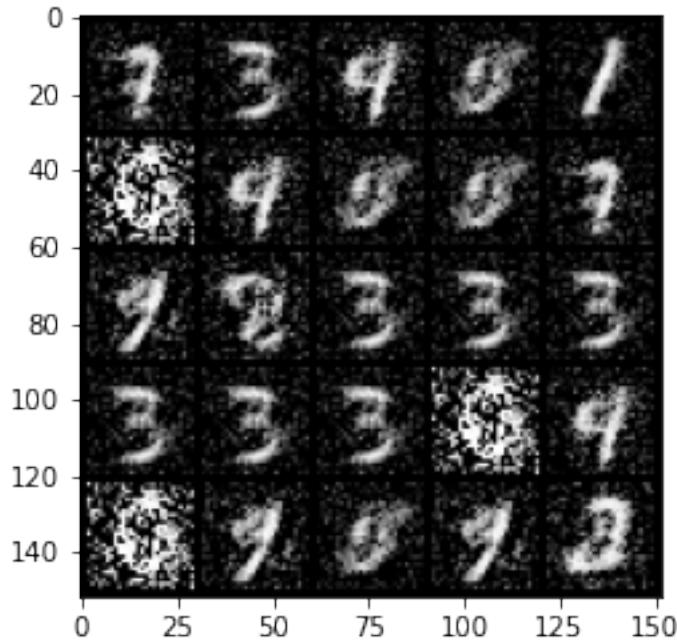
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

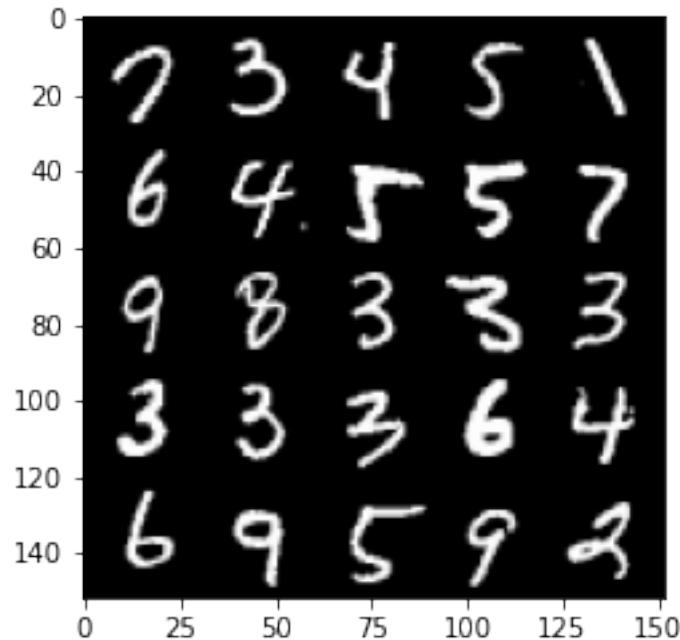
Epoch 423, step 198500 -> generator loss: 0.49779888141155254, discriminator loss: 0.6291394259929662



```
100%|      | 469/469 [00:13<00:00, 34.45it/s]
31%|      | 144/469 [00:04<00:09, 35.06it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

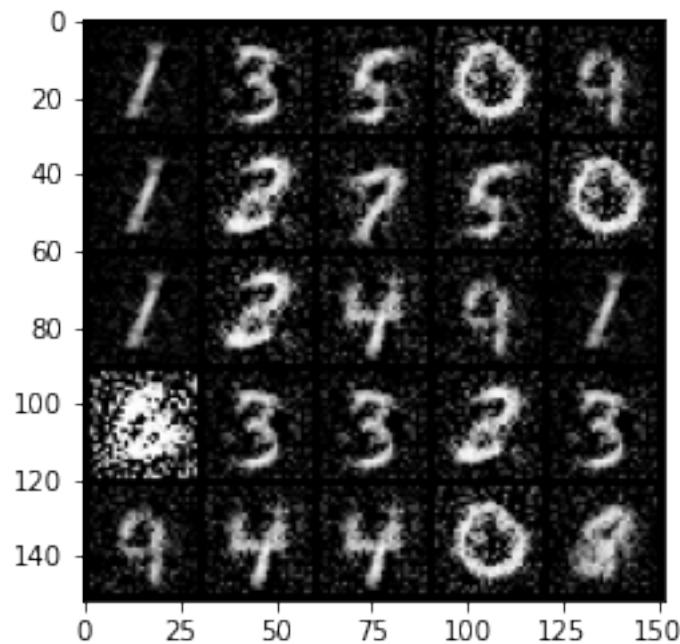
Epoch 424, step 199000 -> generator loss: 0.48746535241603806, discriminator loss: 0.657102476596832

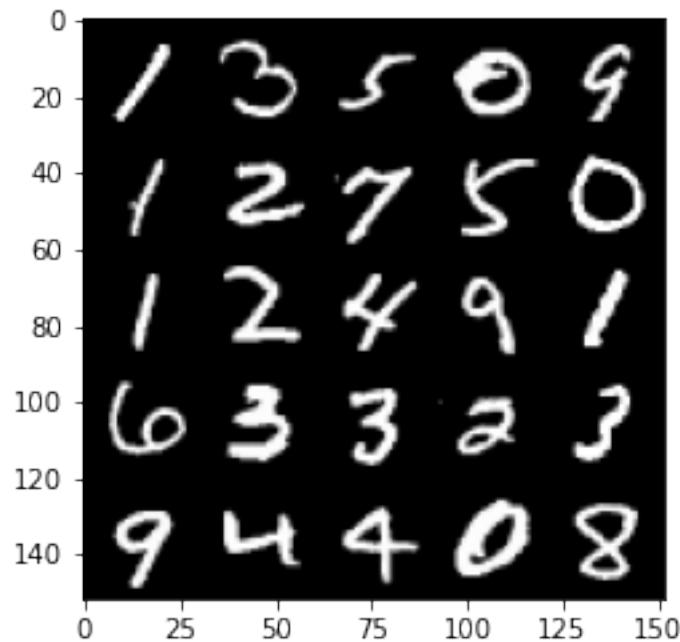




```
100%|      | 469/469 [00:13<00:00, 34.10it/s]
37%|      | 174/469 [00:04<00:08, 35.71it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

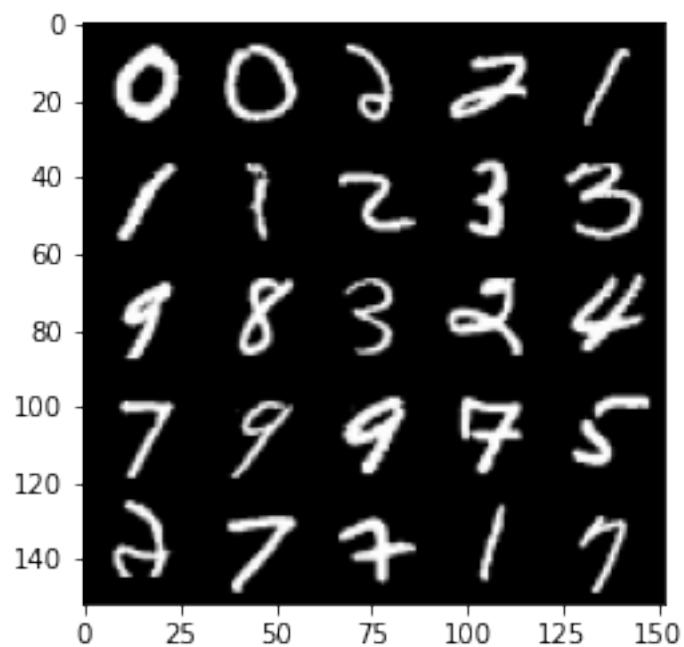
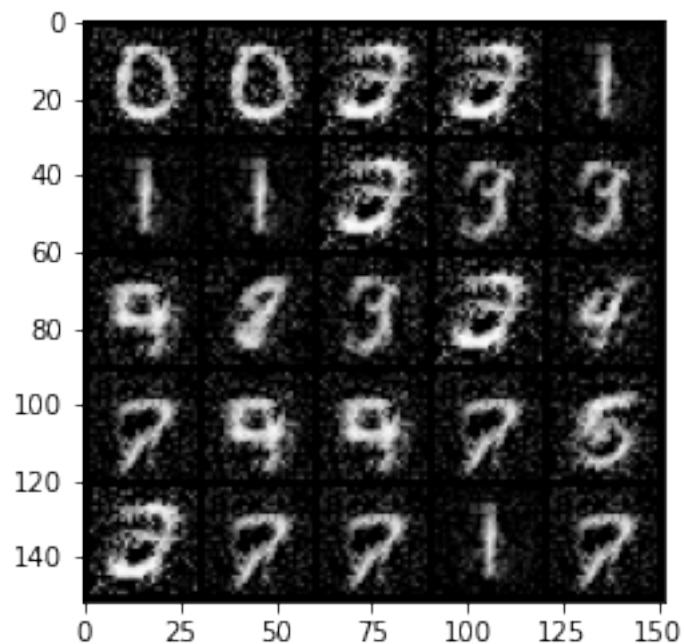
```
Epoch 425, step 199500 -> generator loss: 0.4657399488687514, discriminator
loss: 0.674263376116752
```





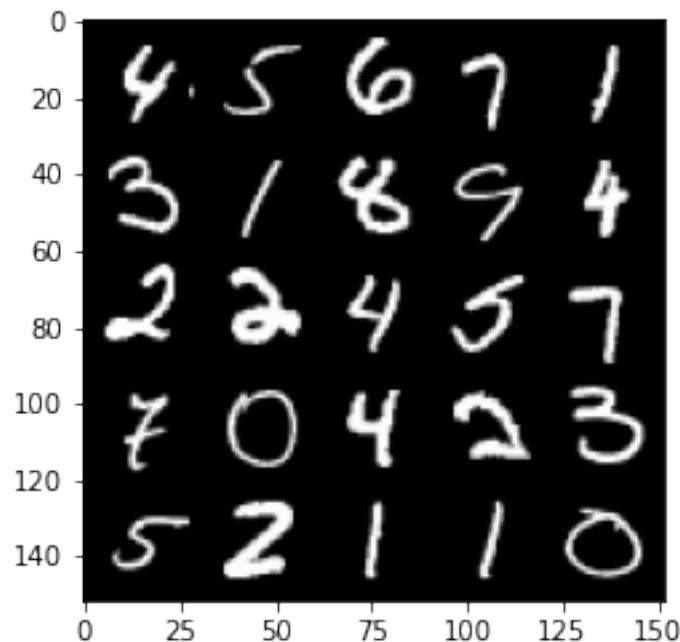
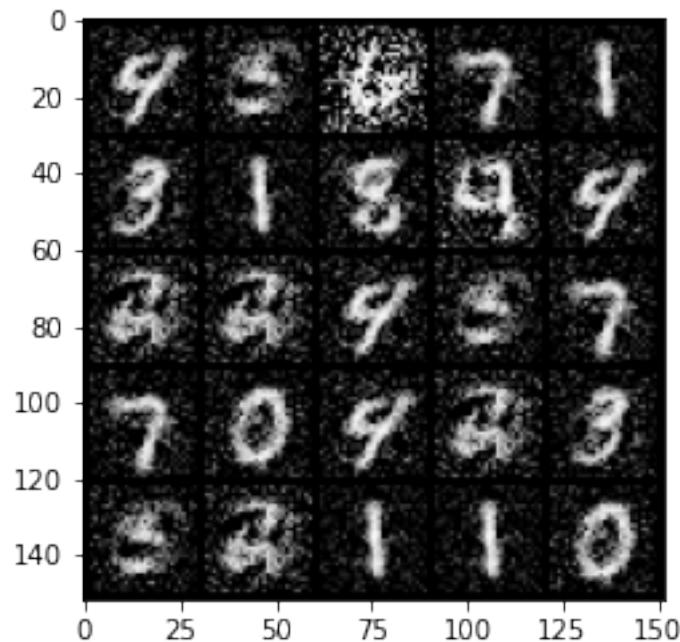
```
100%|      | 469/469 [00:13<00:00, 34.20it/s]
43%|      | 204/469 [00:05<00:07, 35.29it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 426, step 200000 -> generator loss: 0.47687807601690313, discriminator
loss: 0.6611187695264823
```



100% | 469/469 [00:13<00:00, 33.93it/s]  
50% | 234/469 [00:06<00:06, 36.47it/s] Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).

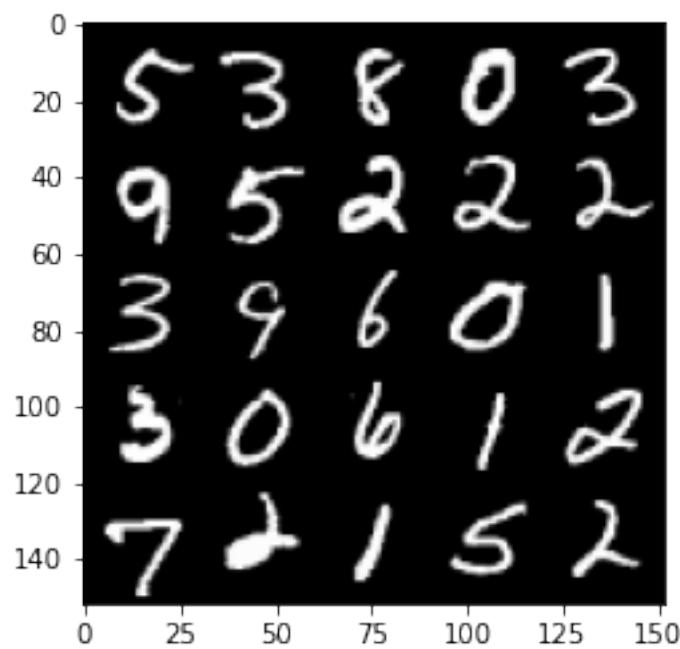
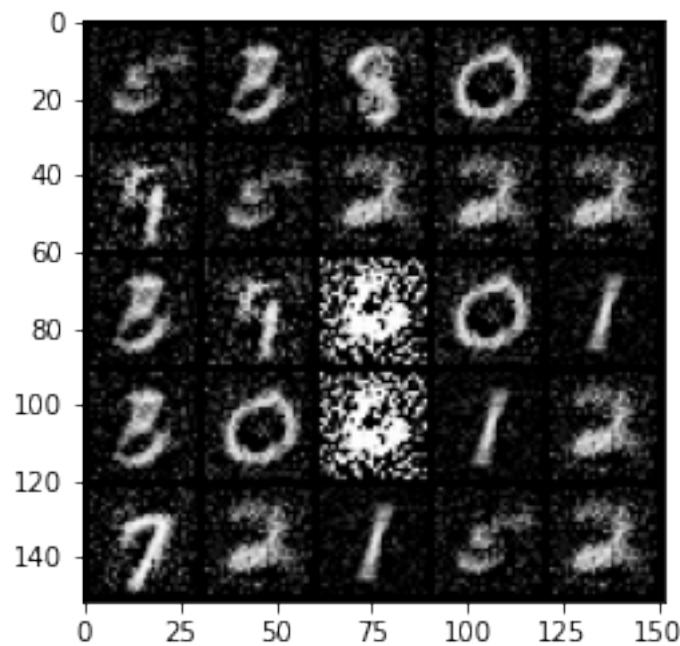
Epoch 427, step 200500 -> generator loss: 0.47872076886892306, discriminator loss: 0.6561565560102464



100% | 469/469 [00:13<00:00, 34.35it/s]

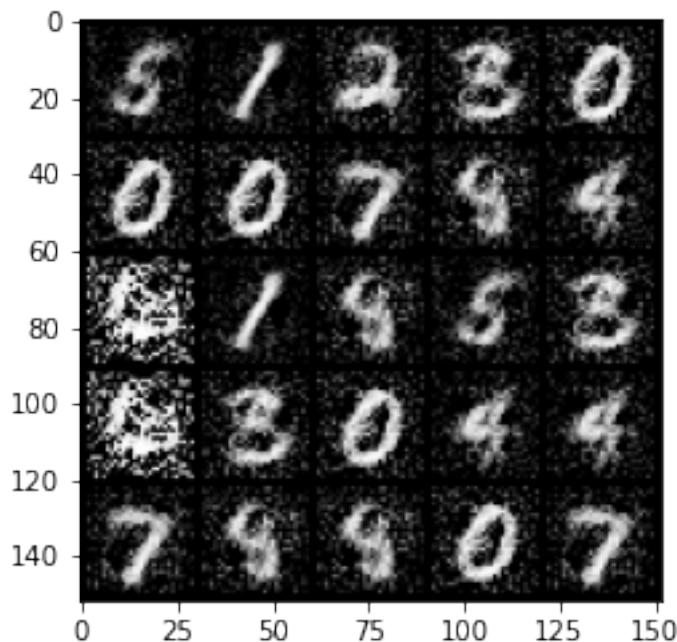
57%| 266/469 [00:07<00:05, 35.78it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

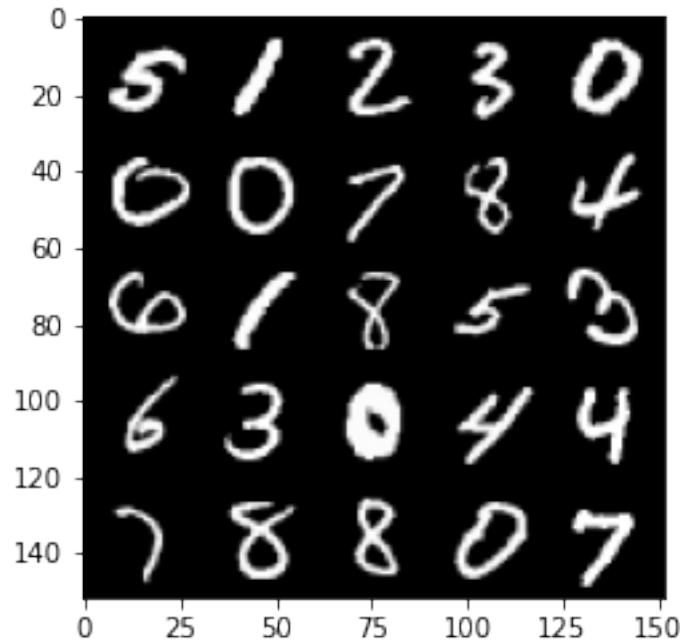
Epoch 428, step 201000 -> generator loss: 0.47263505369424796, discriminator loss: 0.6747106547355649



```
100%|      | 469/469 [00:13<00:00, 34.51it/s]
64%|      | 299/469 [00:08<00:04, 36.48it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

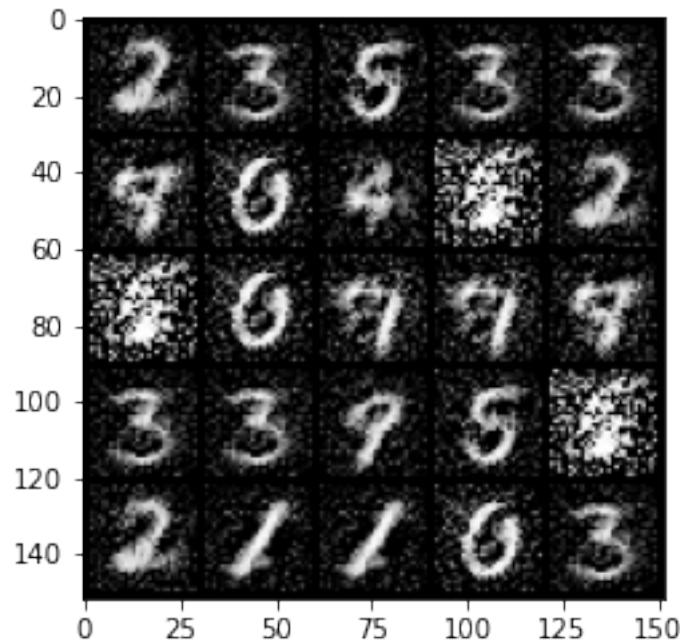
Epoch 429, step 201500 -> generator loss: 0.47213065189123143, discriminator loss: 0.6662087290287014

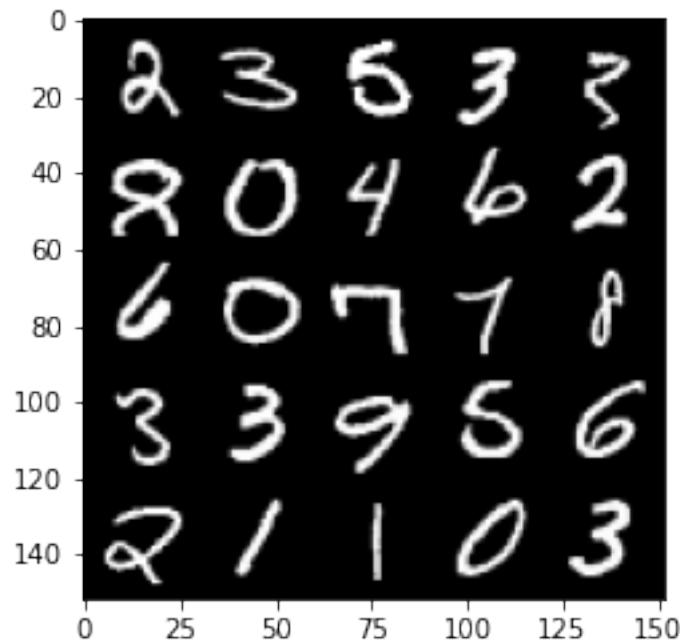




```
100%|      | 469/469 [00:13<00:00, 34.30it/s]
70%|      | 328/469 [00:09<00:03, 35.89it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

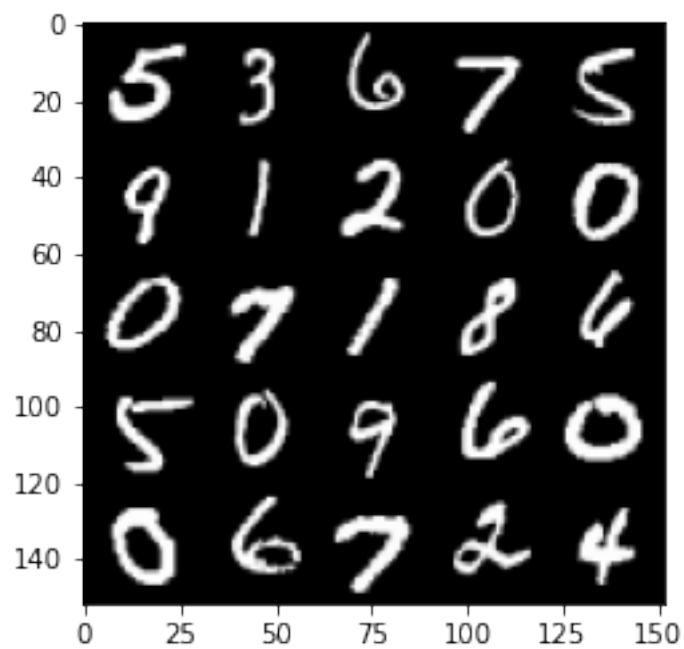
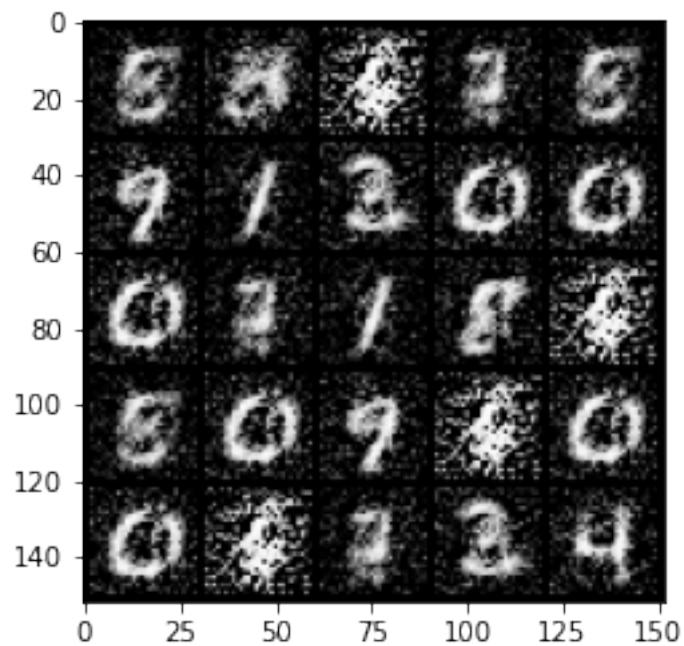
Epoch 430, step 202000 -> generator loss: 0.47891531521081937, discriminator loss: 0.6618875616788861





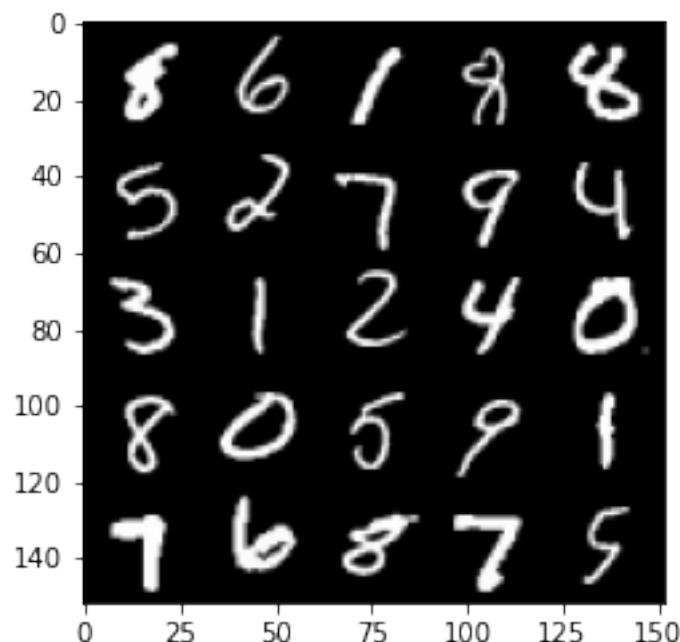
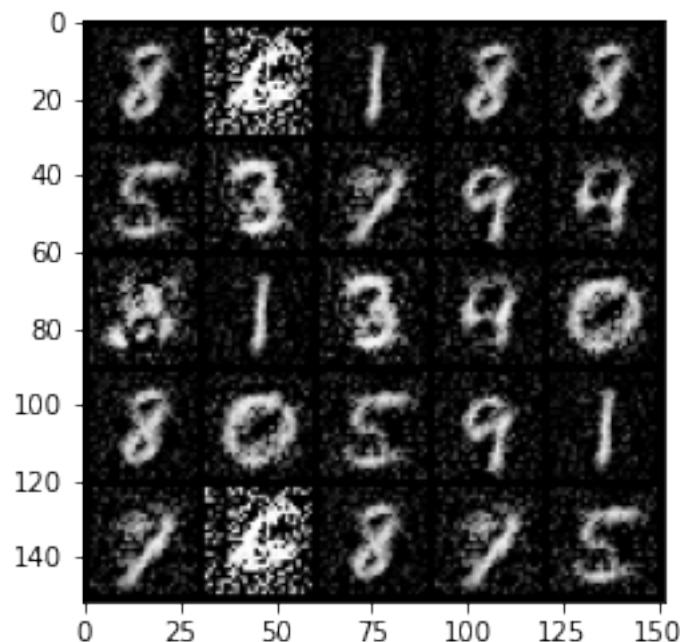
```
100% | 469/469 [00:13<00:00, 34.58it/s]
77% | 360/469 [00:10<00:03, 35.80it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 431, step 202500 -> generator loss: 0.4789106401801107, discriminator
loss: 0.6568630959987645
```



```
100%|      | 469/469 [00:13<00:00, 33.72it/s]
83%|      | 391/469 [00:10<00:02, 35.74it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

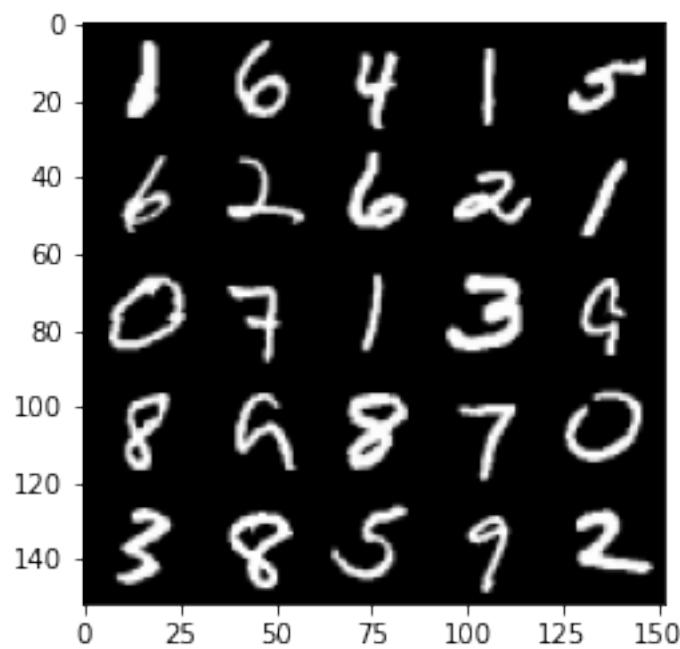
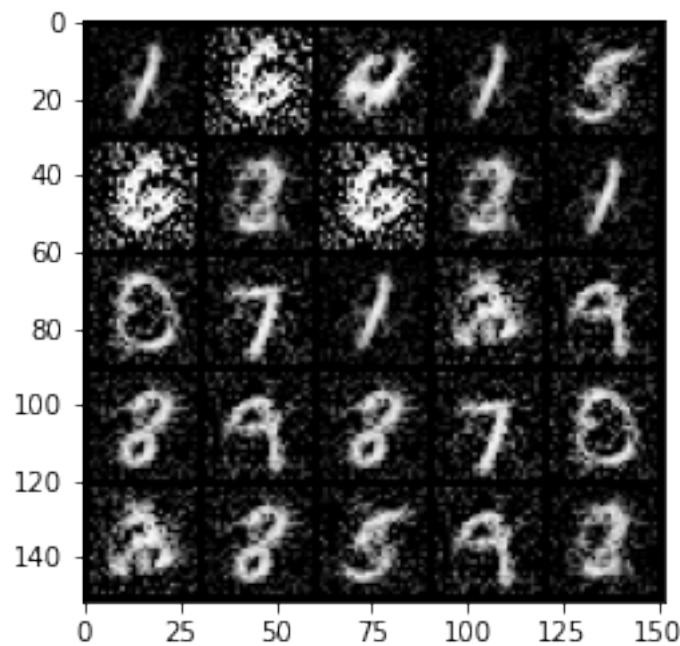
Epoch 432, step 203000 -> generator loss: 0.472617728590965, discriminator loss: 0.6645865244865419



100% | 469/469 [00:13<00:00, 34.48it/s]

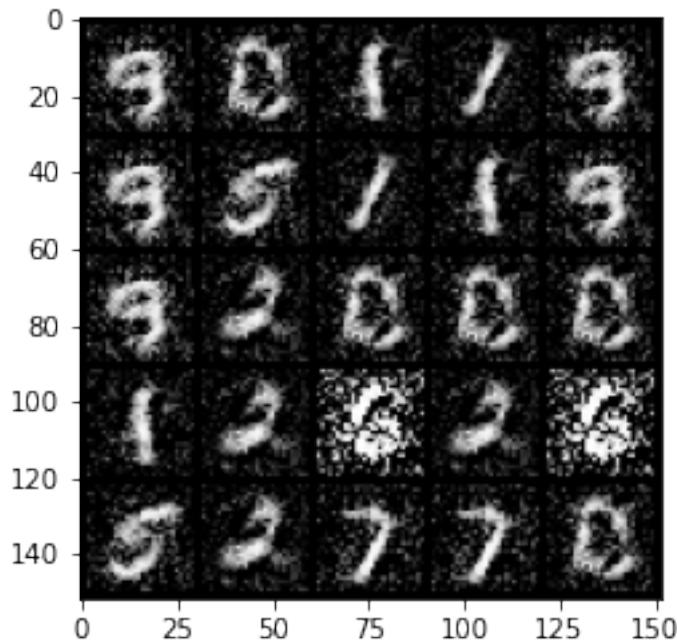
90%| 422/469 [00:11<00:01, 36.17it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

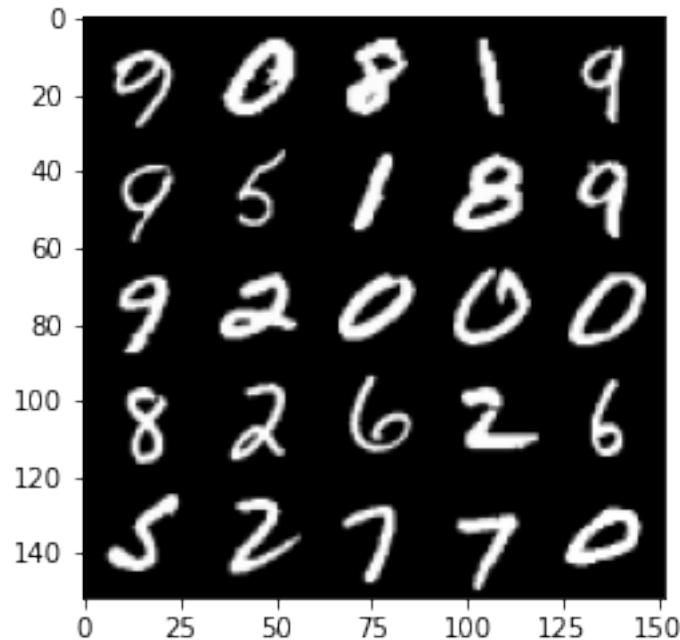
Epoch 433, step 203500 -> generator loss: 0.4785366299152375, discriminator loss: 0.6557256416082378



```
100%|    | 469/469 [00:13<00:00, 34.21it/s]
96%|    | 451/469 [00:12<00:00, 33.46it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

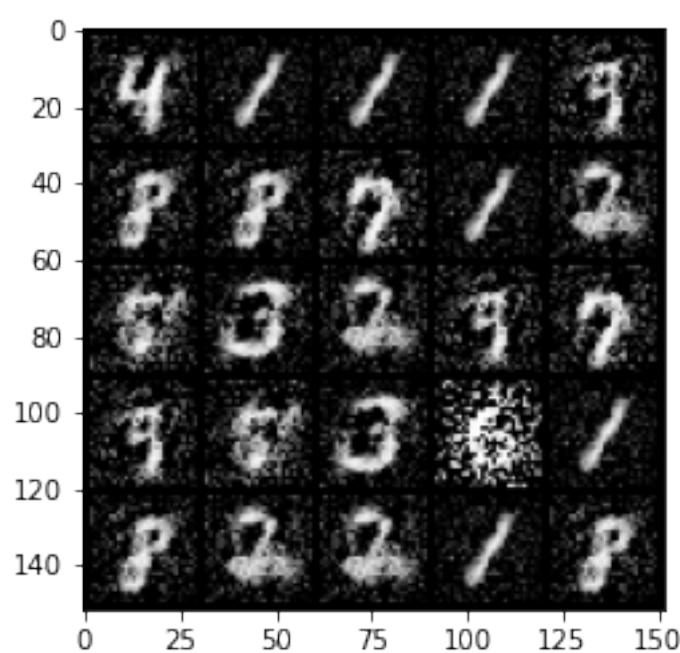
```
Epoch 434, step 204000 -> generator loss: 0.480084871709347, discriminator loss:
0.6508733049631117
```

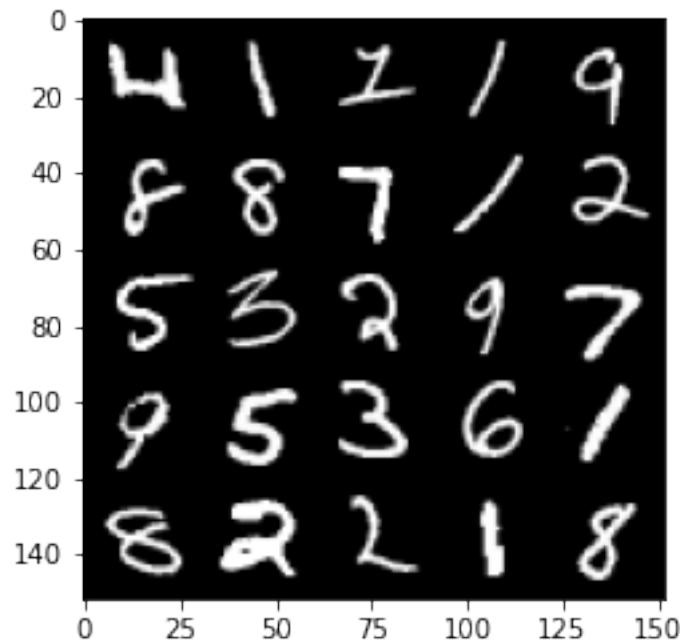




```
100%| 469/469 [00:13<00:00, 34.58it/s]
100%| 469/469 [00:13<00:00, 35.68it/s]
 3%| 16/469 [00:00<00:12, 34.91it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

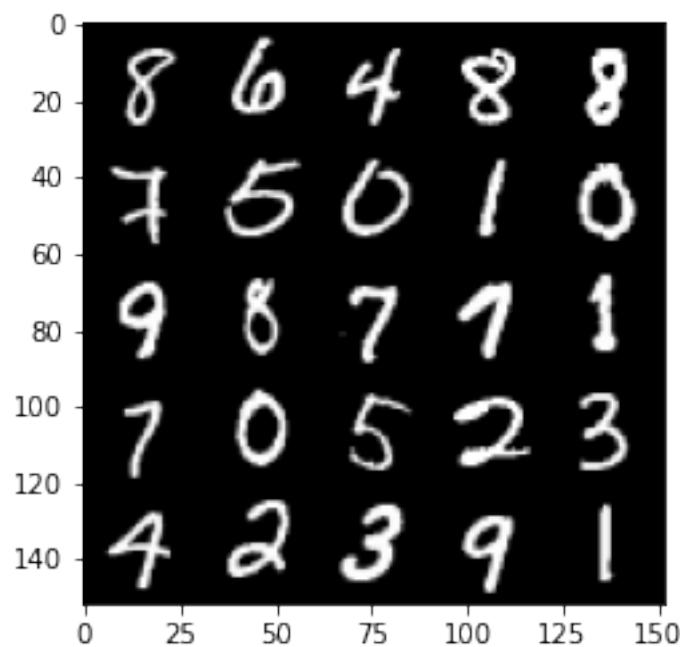
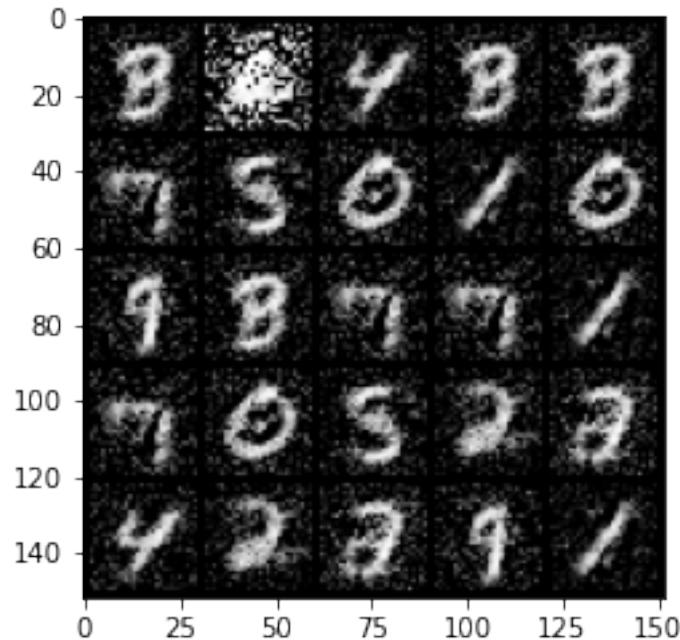
Epoch 436, step 204500 -> generator loss: 0.4903302247524262, discriminator loss: 0.6409569473266602





```
100%| 469/469 [00:13<00:00, 34.22it/s]
 9%| 44/469 [00:01<00:11, 36.02it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

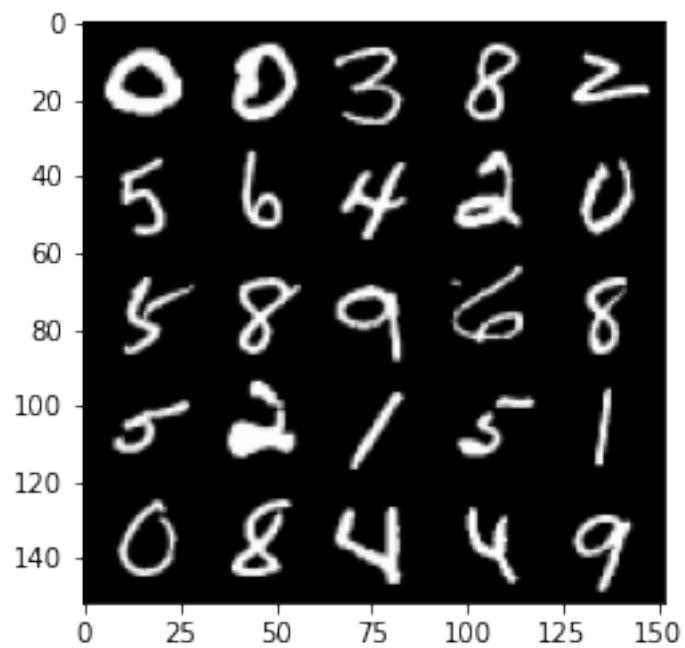
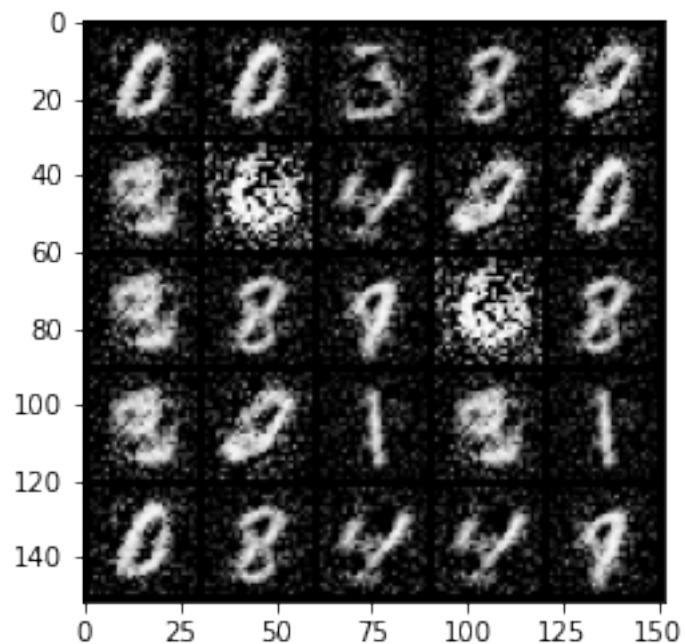
```
Epoch 437, step 205000 -> generator loss: 0.4761873705983163, discriminator
loss: 0.6651952093839637
```



100% | 469/469 [00:13<00:00, 34.11it/s]  
16% | 75/469 [00:02<00:10, 35.82it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 438, step 205500 -> generator loss: 0.47992844462394685, discriminator

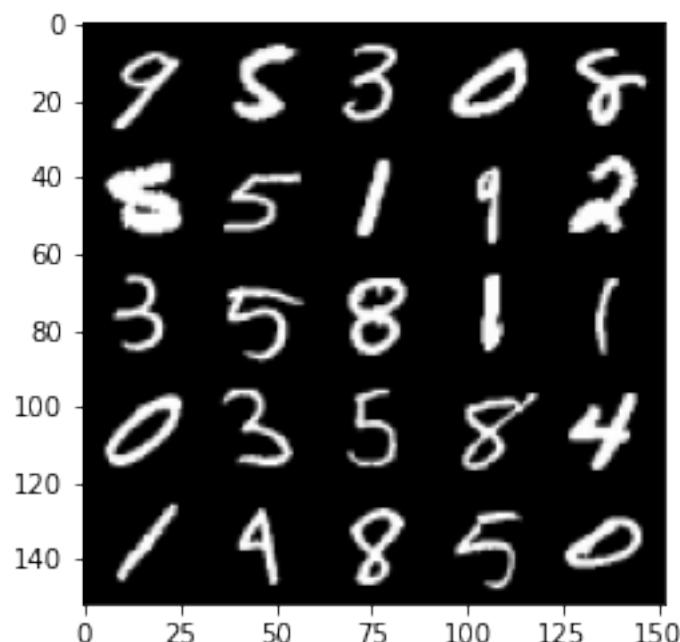
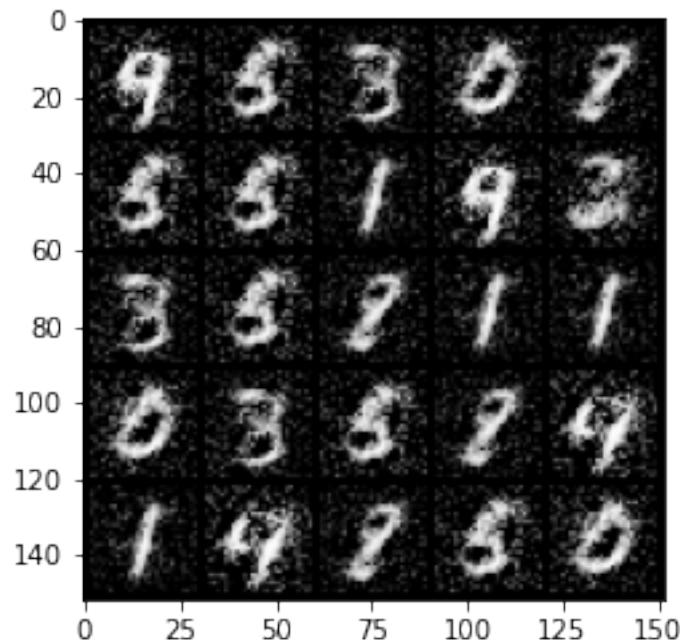
loss: 0.6566311521530153



100% | 469/469 [00:13<00:00, 34.42it/s]  
23% | 108/469 [00:02<00:10, 35.45it/s] Clipping input data to the

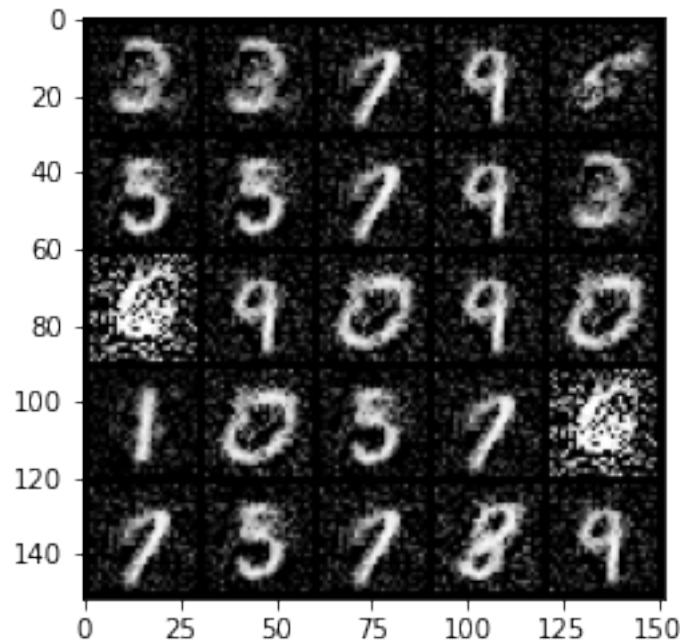
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

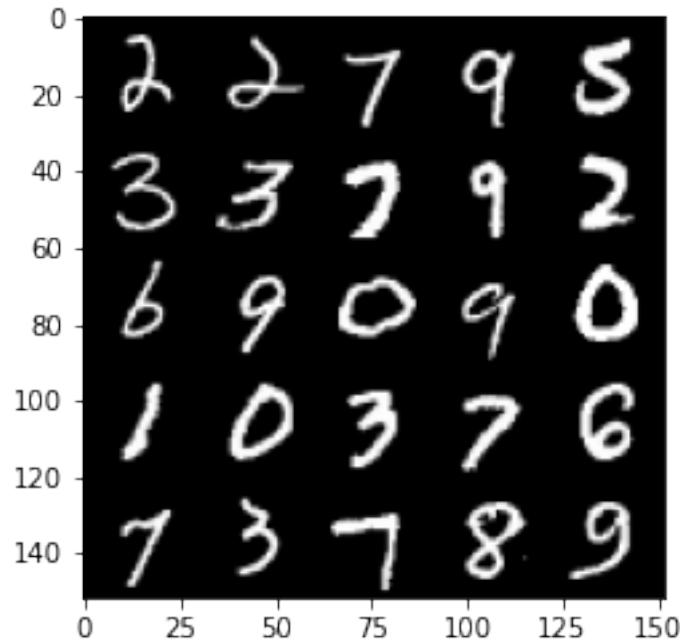
Epoch 439, step 206000 -> generator loss: 0.47898638635873825, discriminator loss: 0.6550197883844382



```
100%|    | 469/469 [00:13<00:00, 34.59it/s]
30%|    | 140/469 [00:03<00:09, 36.23it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

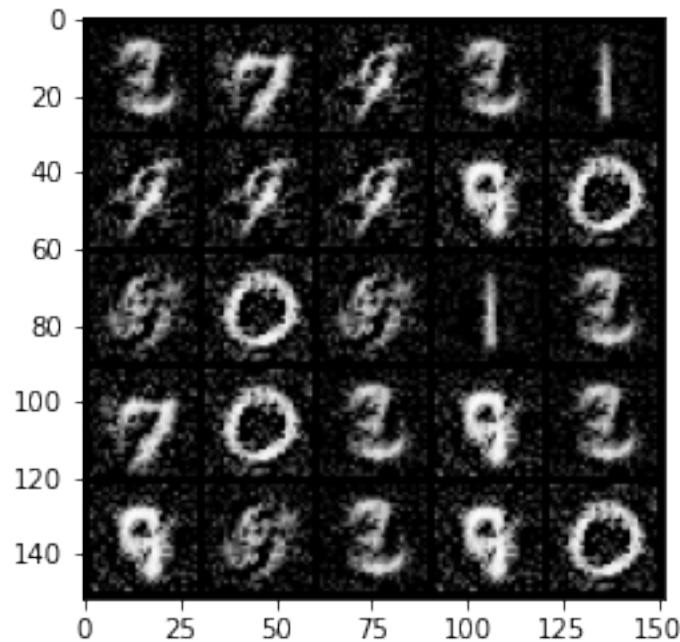
```
Epoch 440, step 206500 -> generator loss: 0.474689712882042, discriminator loss:
0.6601791318655014
```

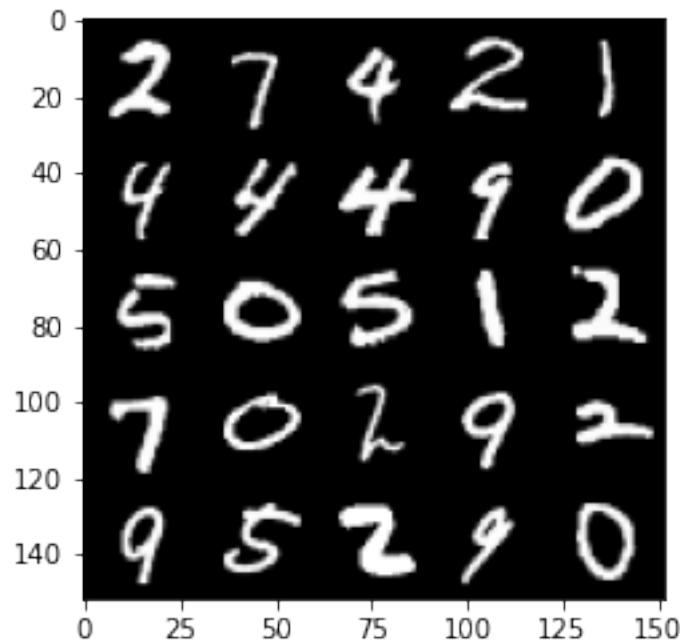




```
100%|      | 469/469 [00:13<00:00, 34.48it/s]
36%|      | 168/469 [00:04<00:08, 36.20it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

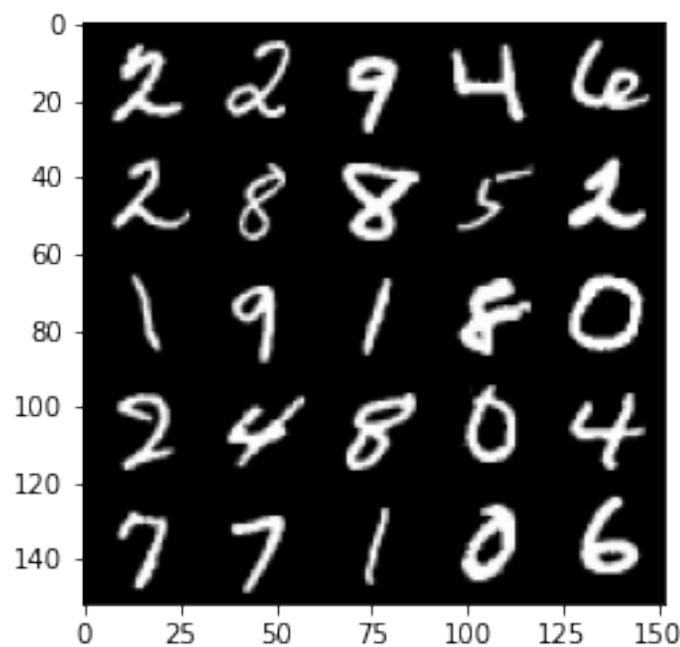
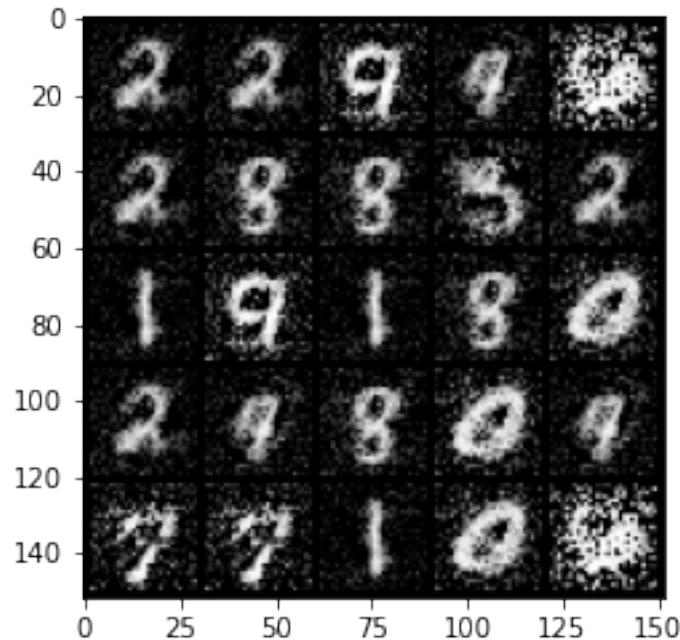
Epoch 441, step 207000 -> generator loss: 0.48955222702026335, discriminator loss: 0.6424729595184331





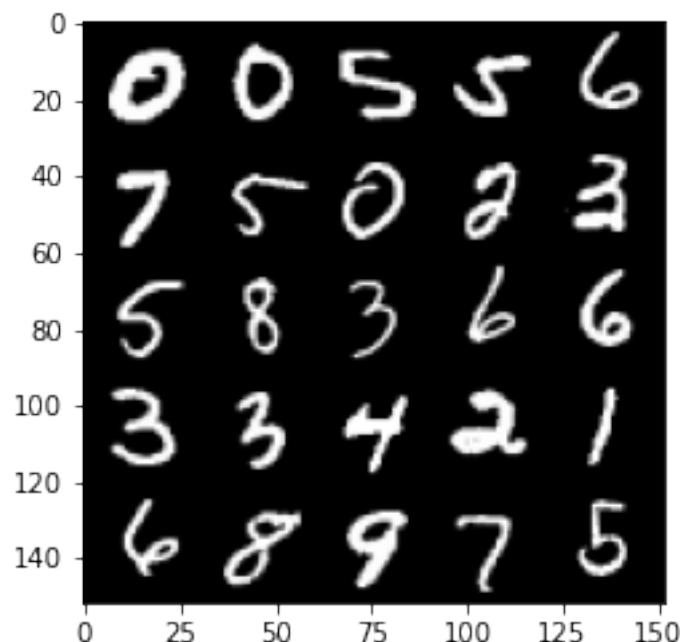
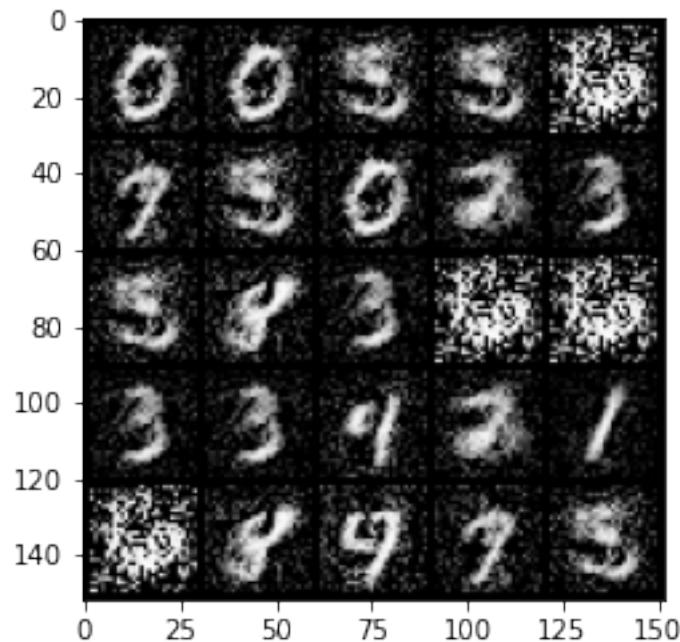
```
100% | 469/469 [00:13<00:00, 34.61it/s]
43% | 202/469 [00:05<00:07, 36.11it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 442, step 207500 -> generator loss: 0.48055006074905365, discriminator
loss: 0.658048403382301
```



```
100%| 469/469 [00:13<00:00, 34.50it/s]
49%| 230/469 [00:06<00:06, 35.68it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

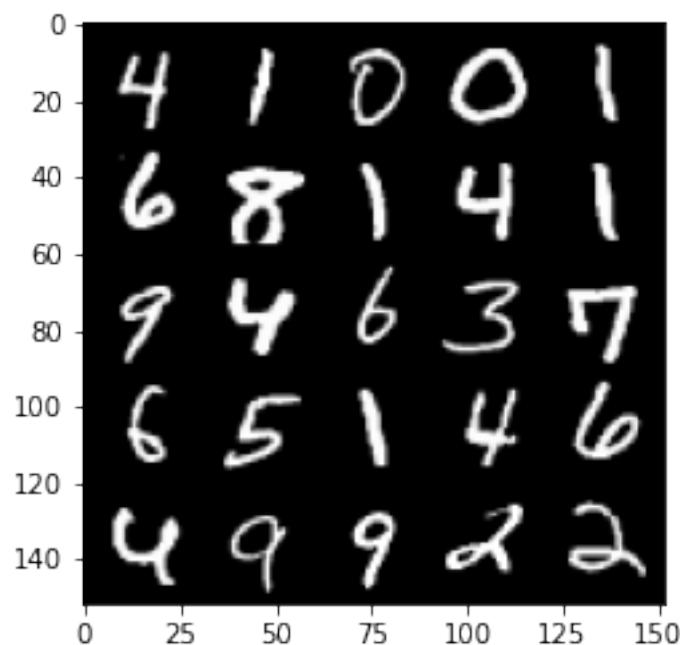
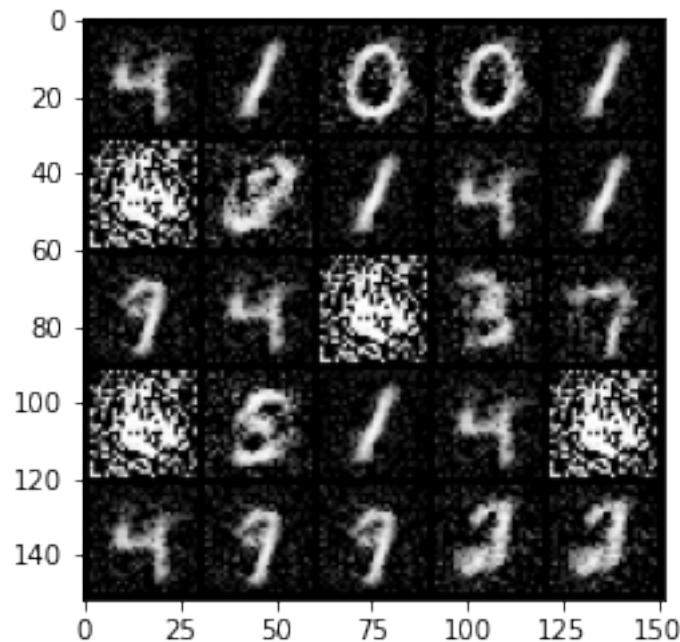
Epoch 443, step 208000 -> generator loss: 0.4758116644620896, discriminator loss: 0.6628455870151513



100% | 469/469 [00:13<00:00, 34.50it/s]

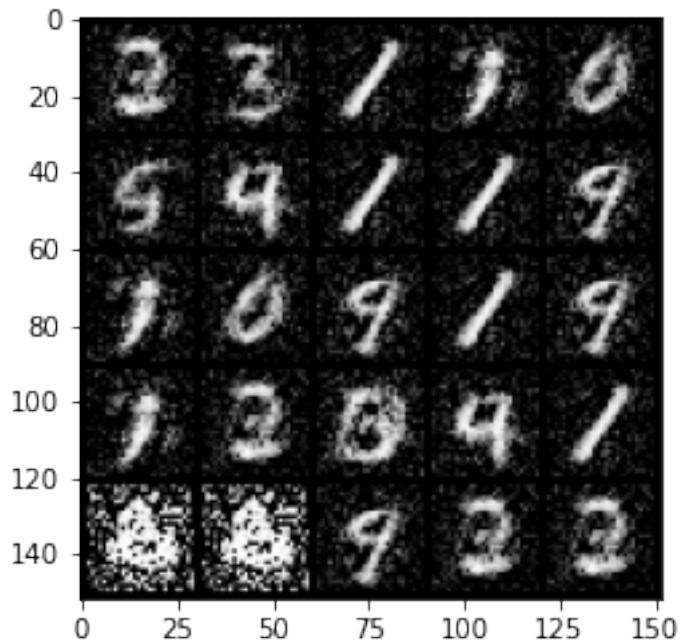
56%| 263/469 [00:07<00:05, 36.52it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

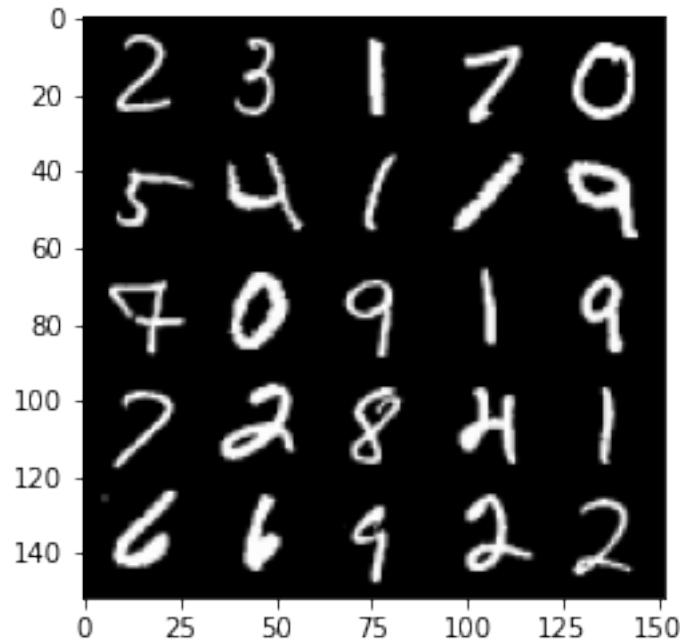
Epoch 444, step 208500 -> generator loss: 0.4783471549749374, discriminator loss: 0.6638360576629634



```
100%|      | 469/469 [00:13<00:00, 34.30it/s]
62%|      | 292/469 [00:08<00:05, 35.25it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

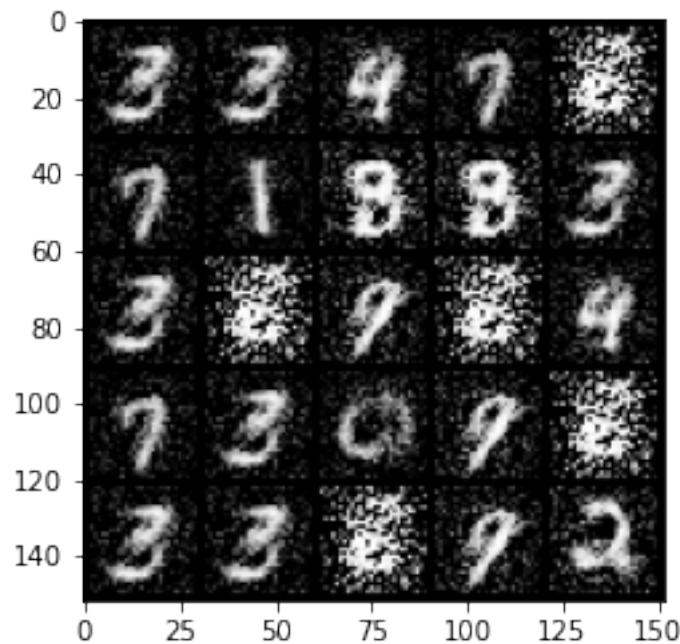
Epoch 445, step 209000 -> generator loss: 0.4843440811038019, discriminator loss: 0.6534625719785698

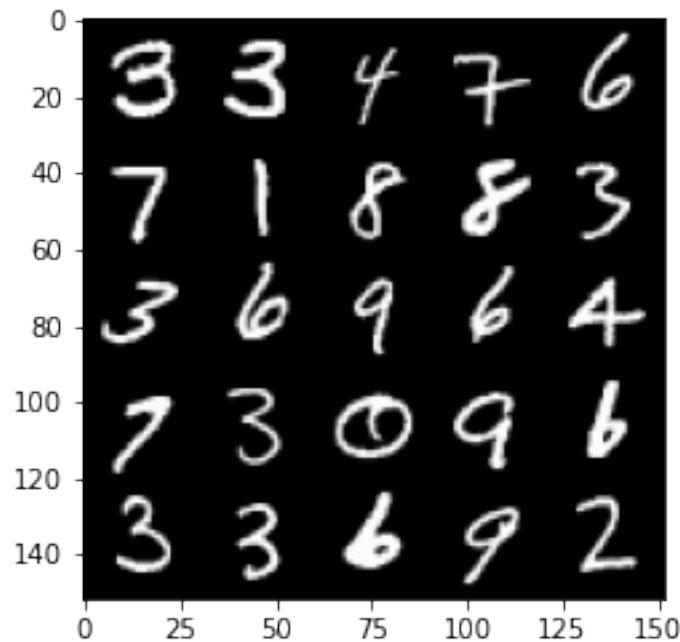




```
100%|      | 469/469 [00:13<00:00, 34.51it/s]
69%|      | 323/469 [00:08<00:04, 35.90it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

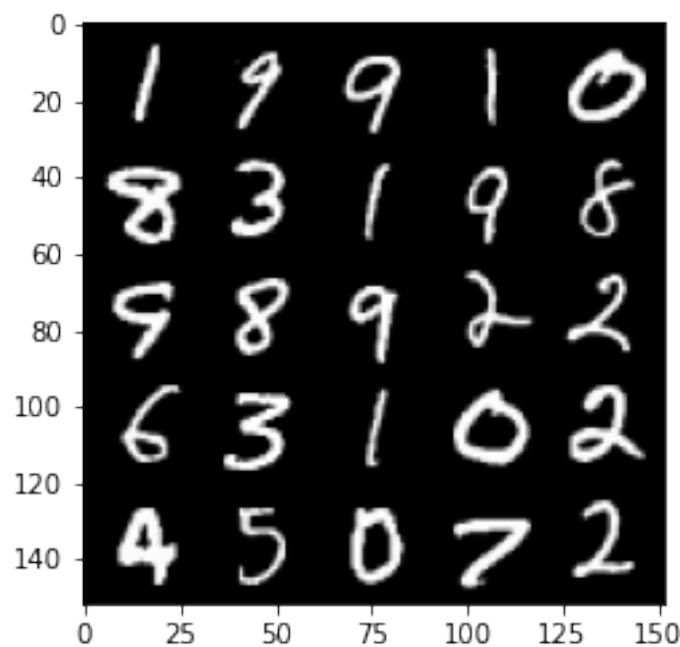
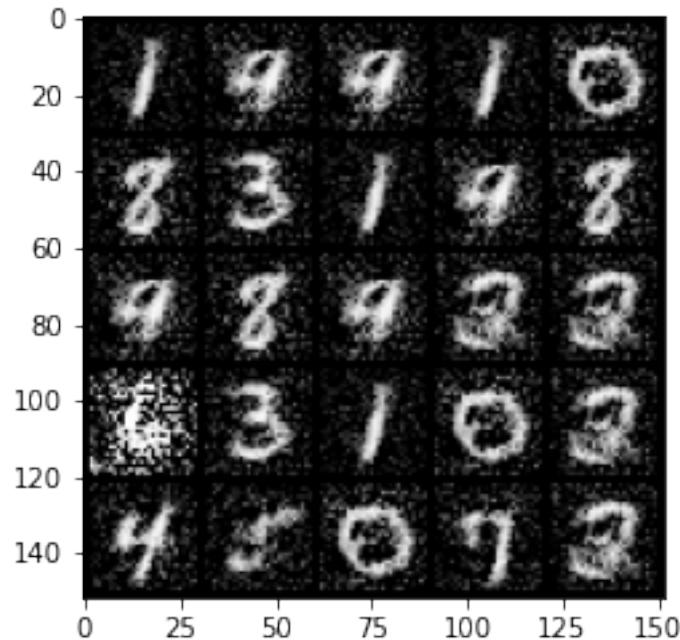
Epoch 446, step 209500 -> generator loss: 0.4779862344264981, discriminator loss: 0.6573712362051006





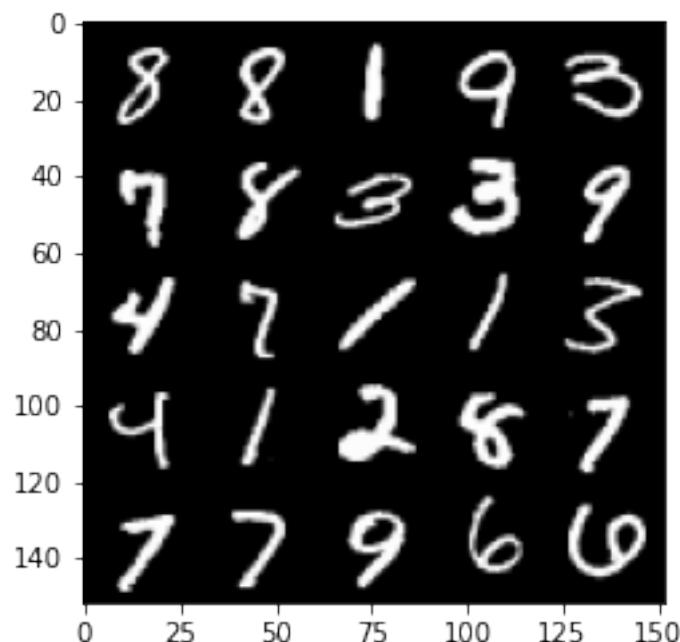
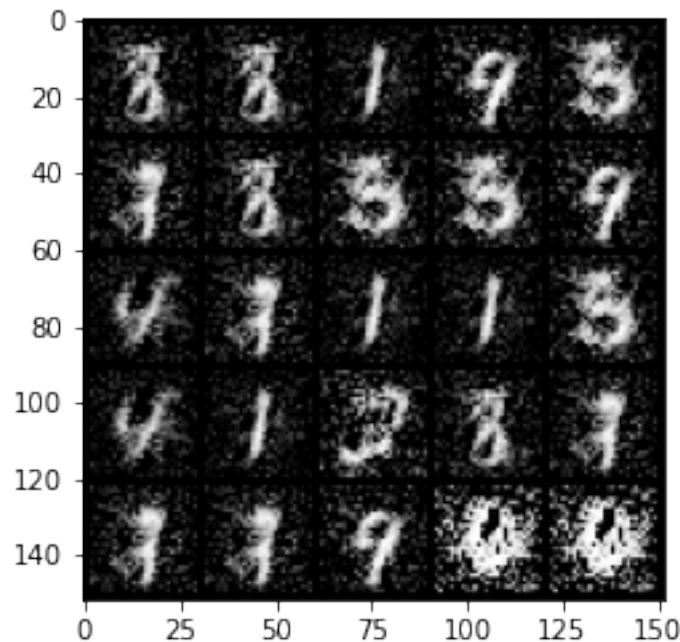
```
100%|     | 469/469 [00:13<00:00, 34.66it/s]
76%|     | 355/469 [00:09<00:03, 35.90it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 447, step 210000 -> generator loss: 0.4676294244527816, discriminator
loss: 0.6757746158838268
```



```
100%|      | 469/469 [00:13<00:00, 34.23it/s]
83%|      | 388/469 [00:10<00:02, 32.06it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

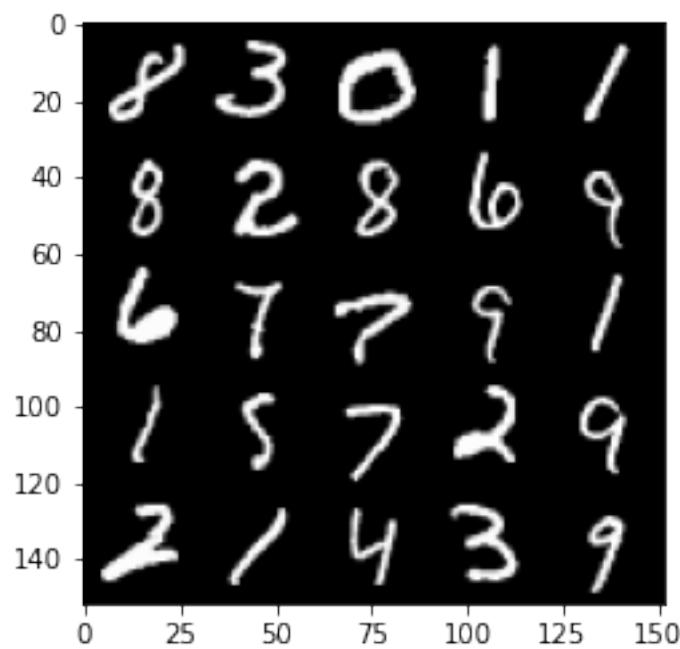
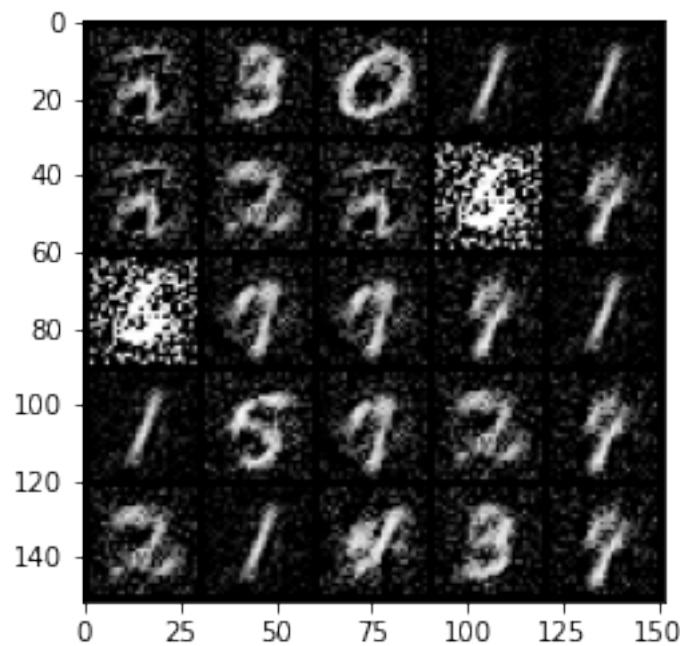
Epoch 448, step 210500 -> generator loss: 0.49167506140470524, discriminator loss: 0.6403854320049289



100% | 469/469 [00:13<00:00, 34.42it/s]

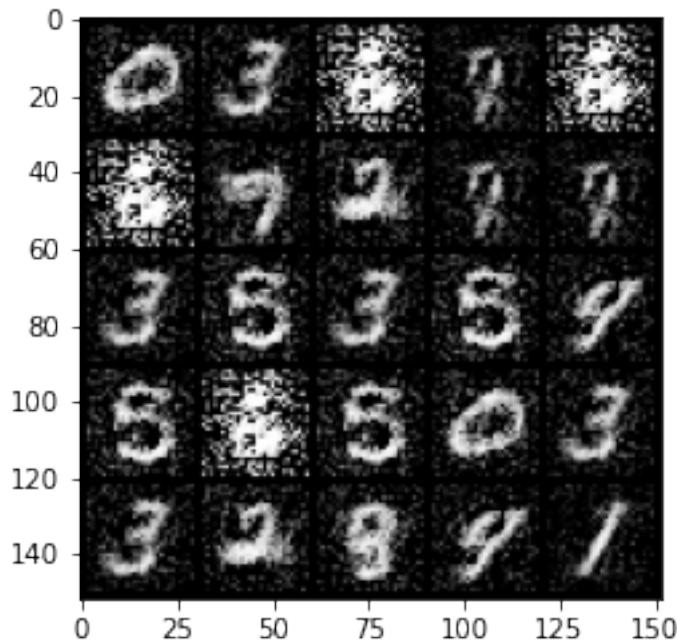
89%| 419/469 [00:11<00:01, 36.02it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

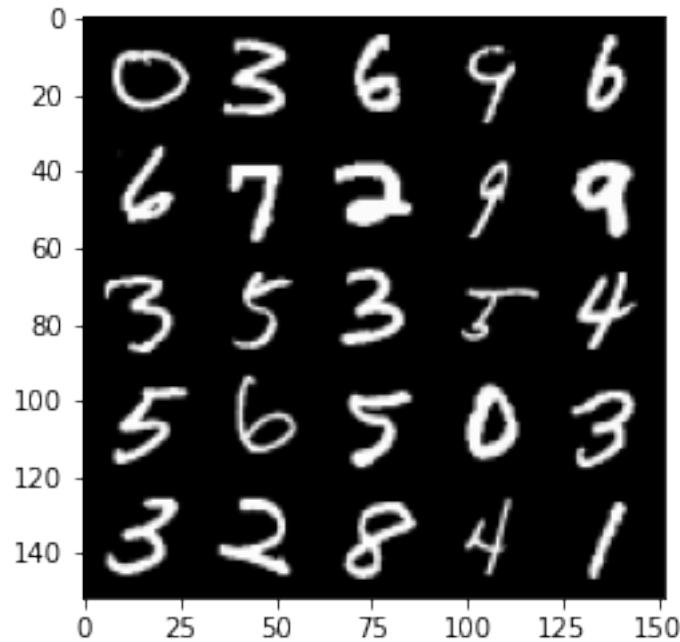
Epoch 449, step 211000 -> generator loss: 0.48752428138256076, discriminator loss: 0.6442329093217853



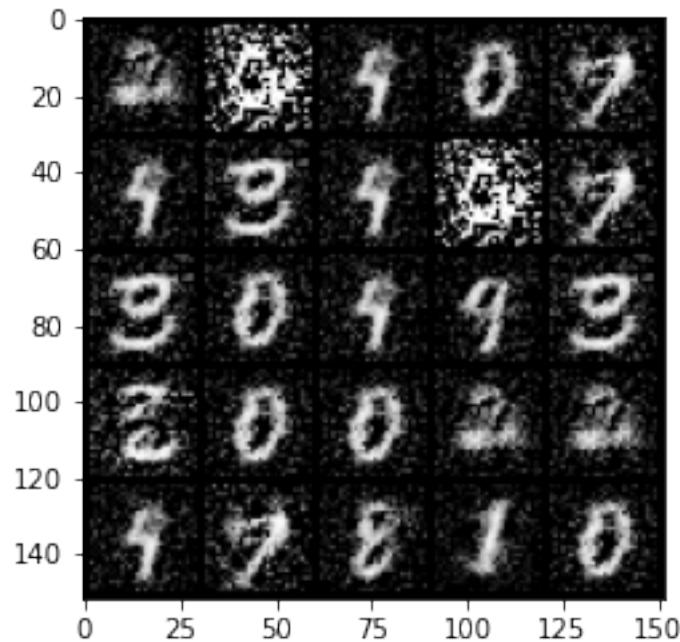
```
100%|     | 469/469 [00:13<00:00, 34.18it/s]
96%|    | 448/469 [00:12<00:00, 35.75it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

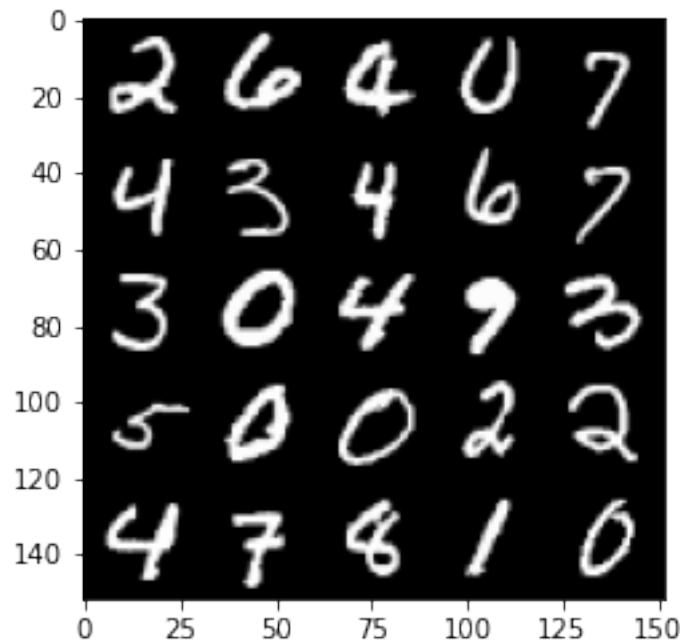
```
Epoch 450, step 211500 -> generator loss: 0.48052241665124923, discriminator
loss: 0.6500842956900595
```



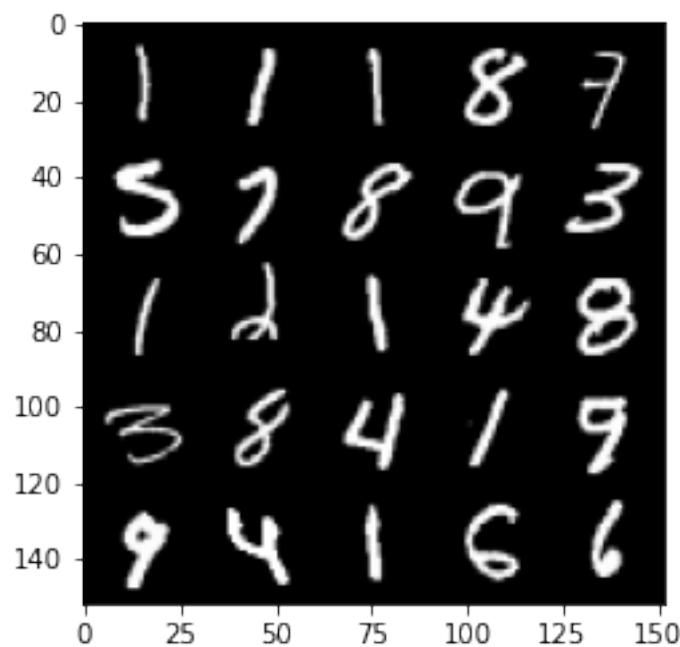
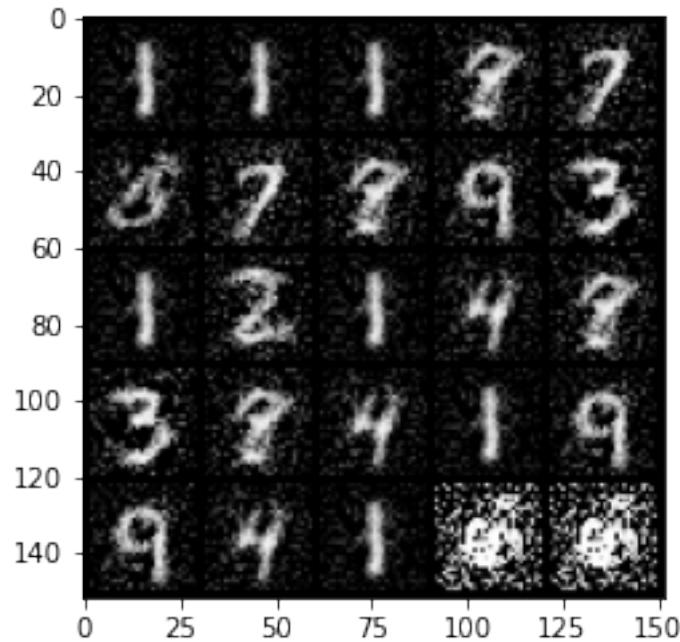


```
100%| 469/469 [00:13<00:00, 34.49it/s]
100%| 469/469 [00:13<00:00, 35.57it/s]
 2%|   11/469 [00:00<00:13, 33.89it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 452, step 212000 -> generator loss: 0.49237657213211056, discriminator
loss: 0.6451956528425218
```





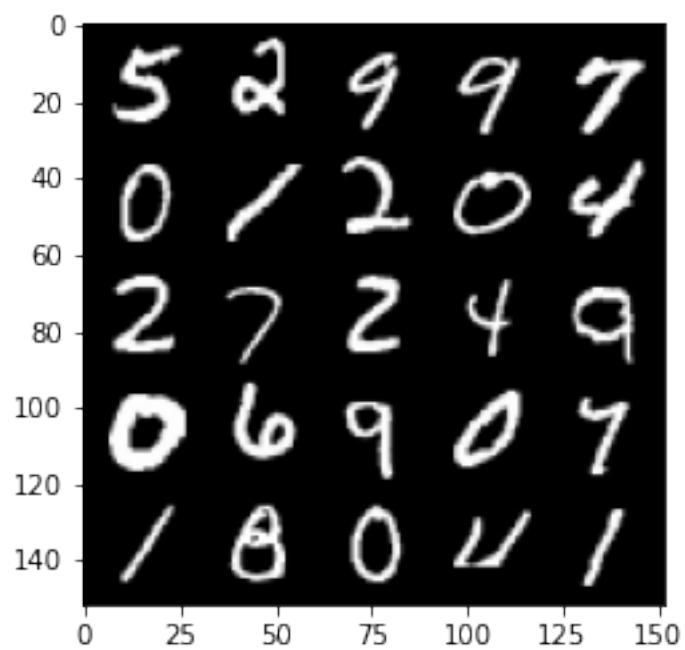
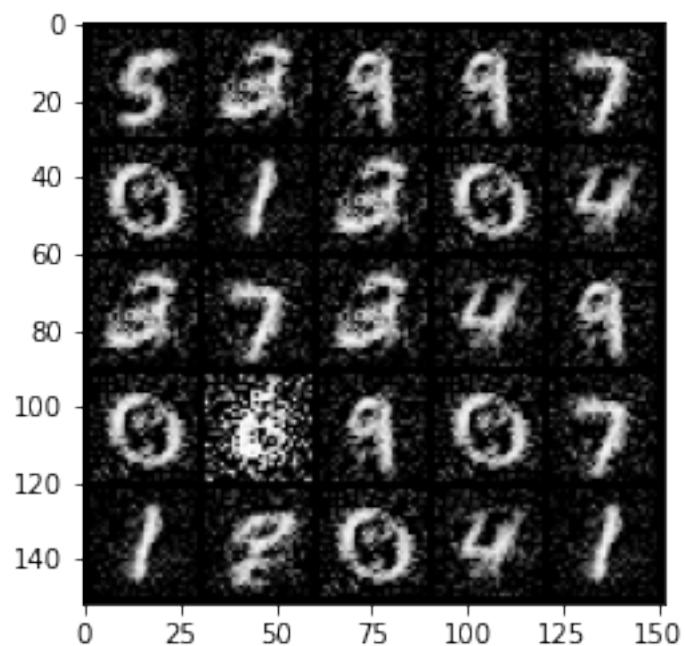
```
100%| 469/469 [00:14<00:00, 33.10it/s]
 9%| 42/469 [00:01<00:12, 33.59it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 453, step 212500 -> generator loss: 0.47162621700763746, discriminator
loss: 0.6683149005174636
```



```
100%| 469/469 [00:14<00:00, 32.97it/s]
16%| 74/469 [00:02<00:11, 35.91it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 454, step 213000 -> generator loss: 0.47705617719888693, discriminator

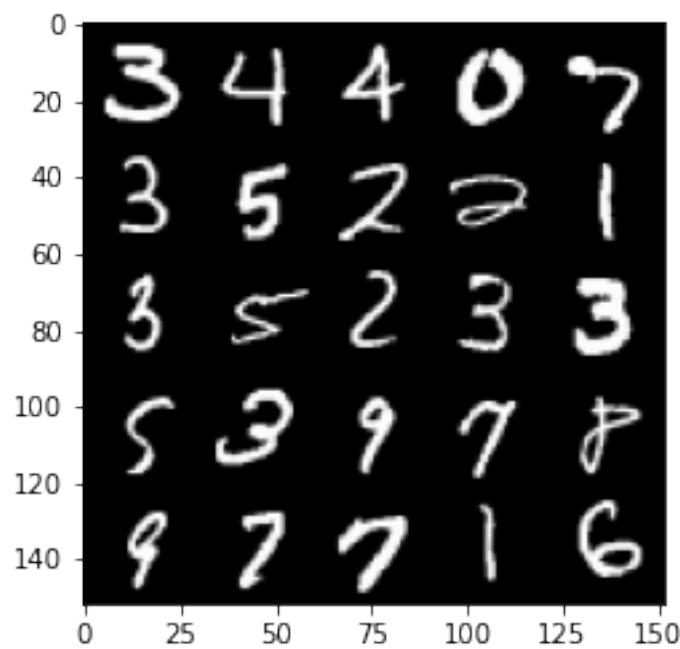
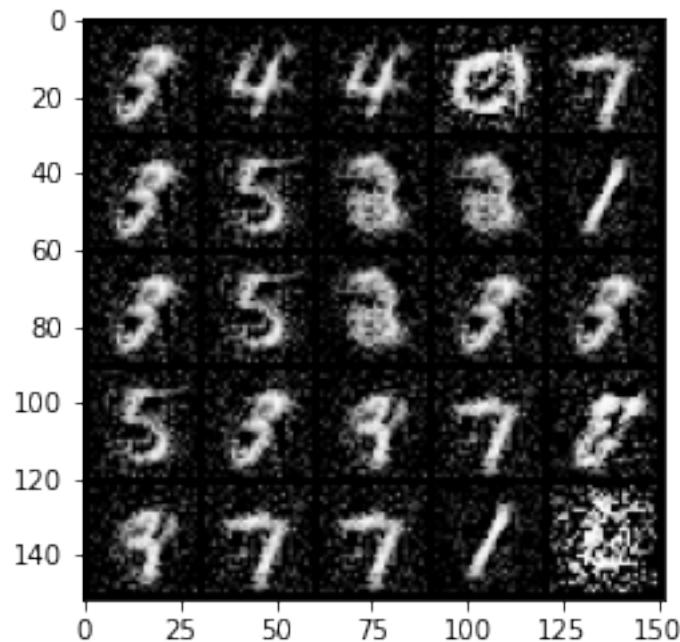
loss: 0.6629349782466889



100% | 469/469 [00:13<00:00, 34.27it/s]  
22% | 102/469 [00:02<00:10, 36.36it/s] Clipping input data to the

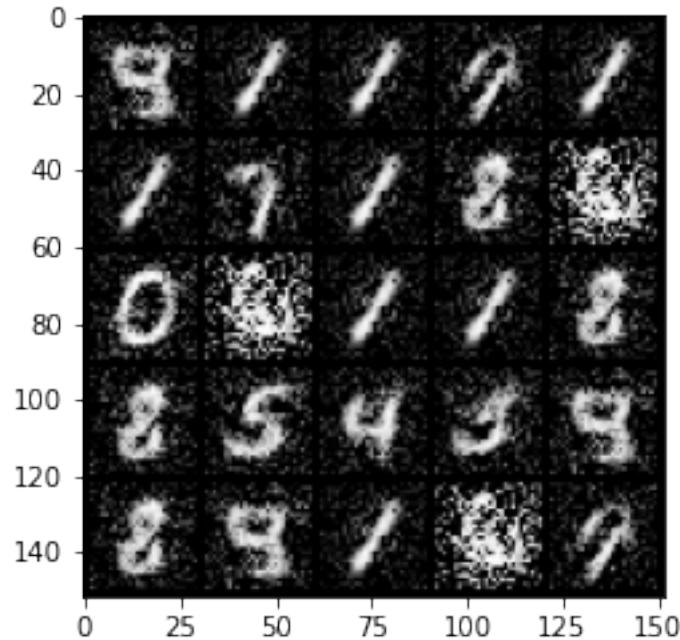
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

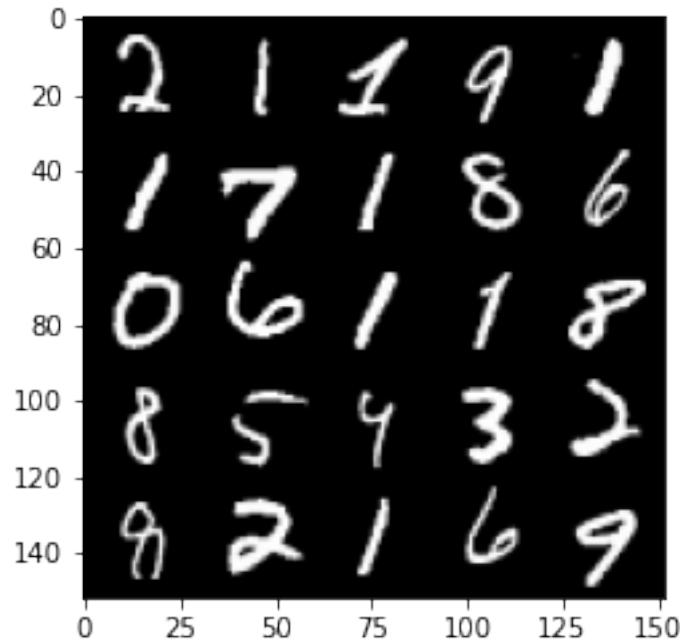
Epoch 455, step 213500 -> generator loss: 0.4865864551067353, discriminator loss: 0.6468104830980298



```
100%| 469/469 [00:13<00:00, 34.45it/s]
29%| 136/469 [00:03<00:09, 35.90it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

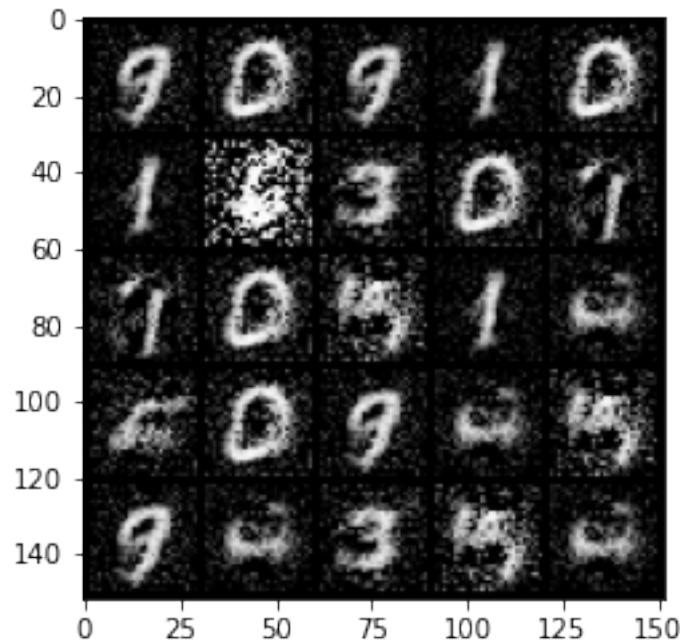
Epoch 456, step 214000 -> generator loss: 0.48971887677907905, discriminator loss: 0.6452029154300691

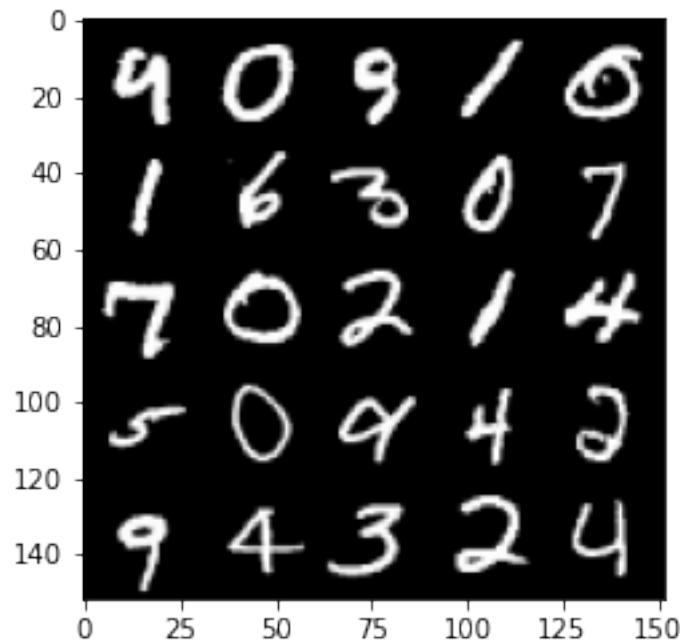




```
100%|      | 469/469 [00:13<00:00, 34.44it/s]
35%|      | 166/469 [00:04<00:08, 36.36it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

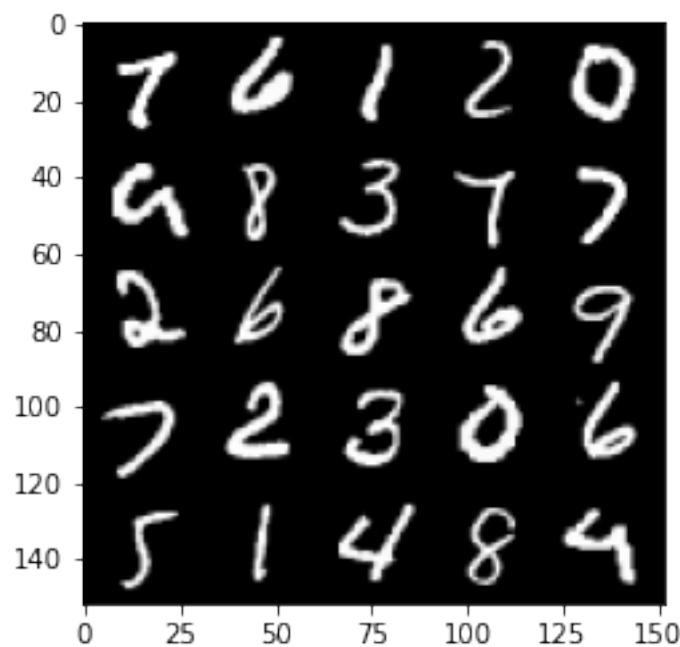
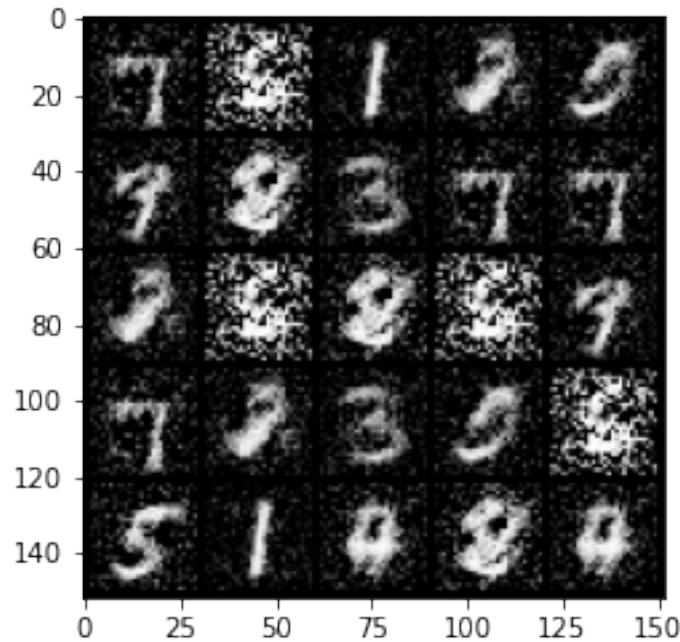
Epoch 457, step 214500 -> generator loss: 0.4997151282429693, discriminator loss: 0.623292320847511





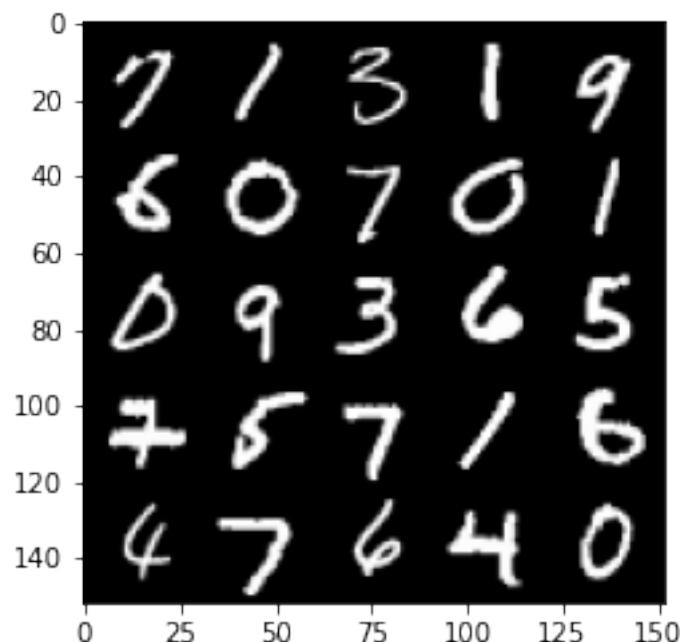
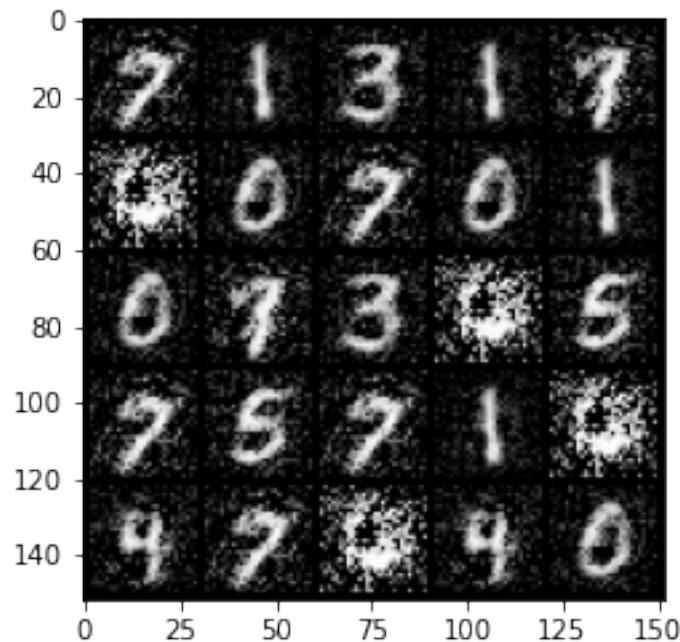
```
100%| 469/469 [00:13<00:00, 34.44it/s]
42%| 195/469 [00:05<00:08, 33.77it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 458, step 215000 -> generator loss: 0.48868920338153815, discriminator
loss: 0.6464701529741285
```



```
100%|      | 469/469 [00:13<00:00, 34.25it/s]
48%|      | 227/469 [00:06<00:06, 36.29it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

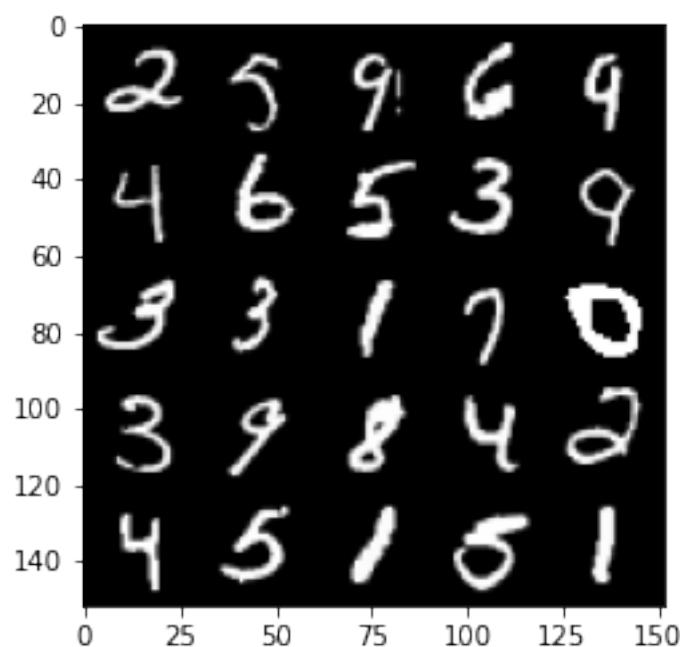
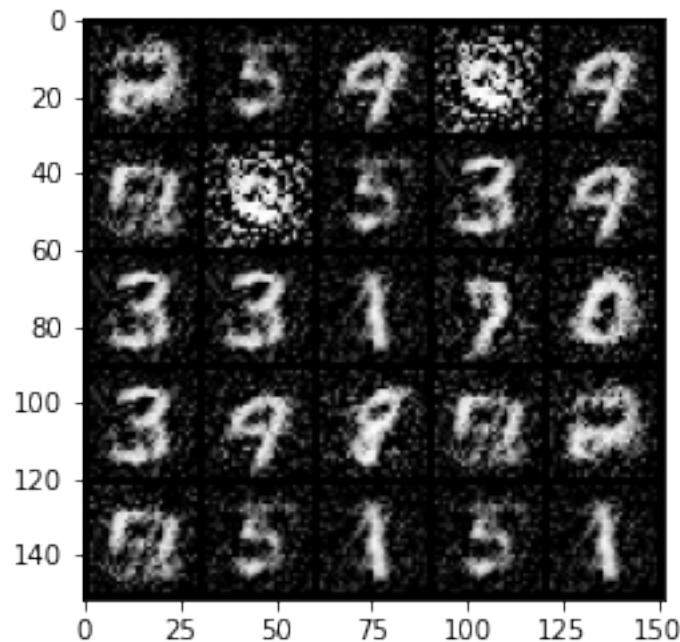
Epoch 459, step 215500 -> generator loss: 0.48936385440826397, discriminator loss: 0.6556181416511544



100% | 469/469 [00:13<00:00, 34.30it/s]

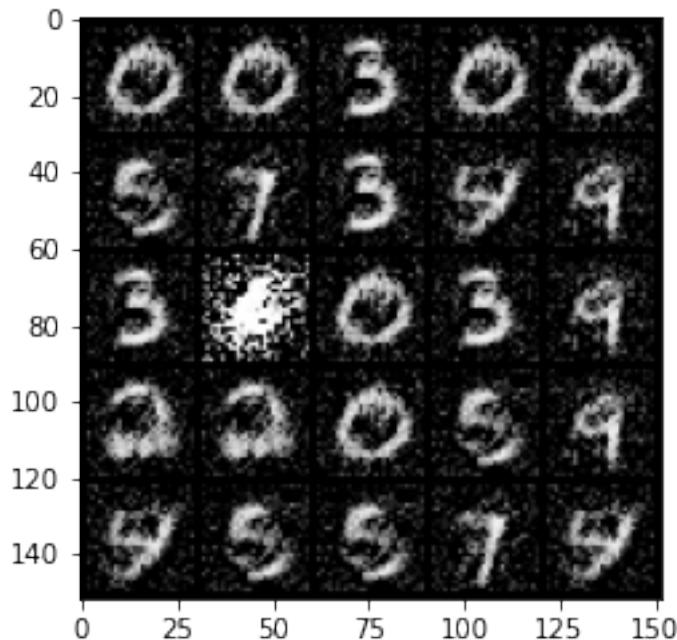
55%| 258/469 [00:07<00:05, 36.19it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

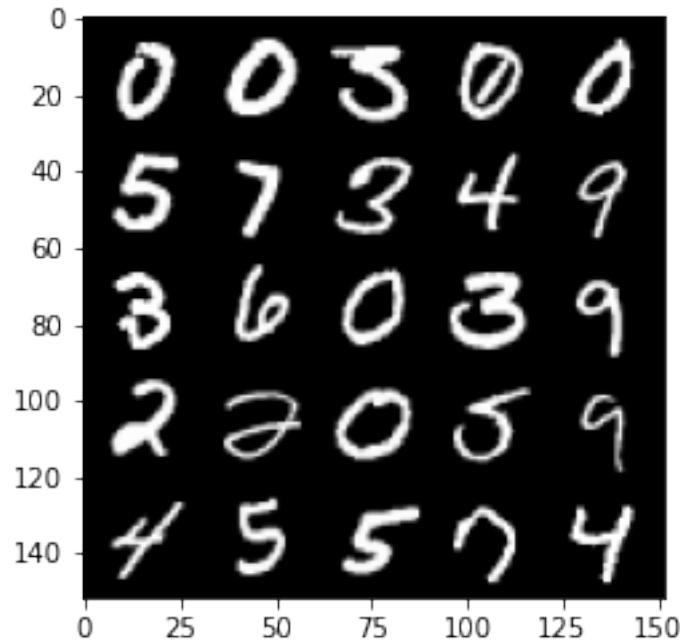
Epoch 460, step 216000 -> generator loss: 0.483029904663563, discriminator loss: 0.6550766440629954



```
100%|      | 469/469 [00:13<00:00, 34.22it/s]
62%|      | 291/469 [00:08<00:04, 35.72it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

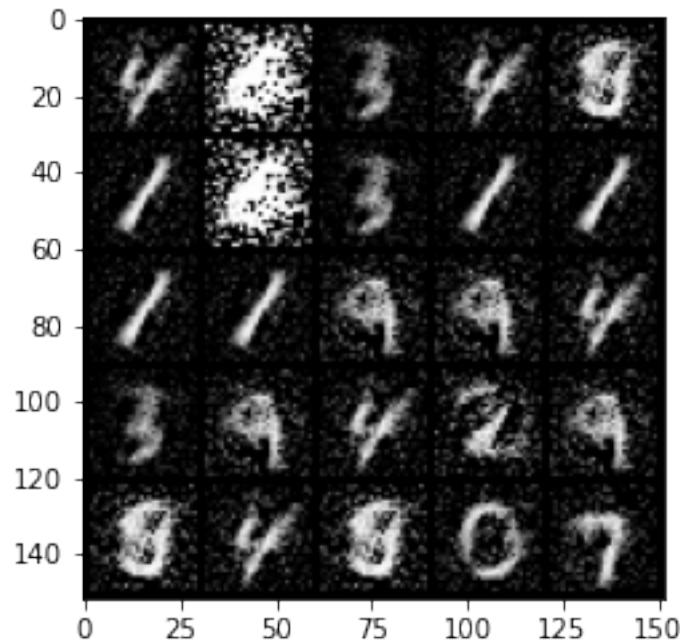
Epoch 461, step 216500 -> generator loss: 0.4860694355368618, discriminator loss: 0.6491131887435908

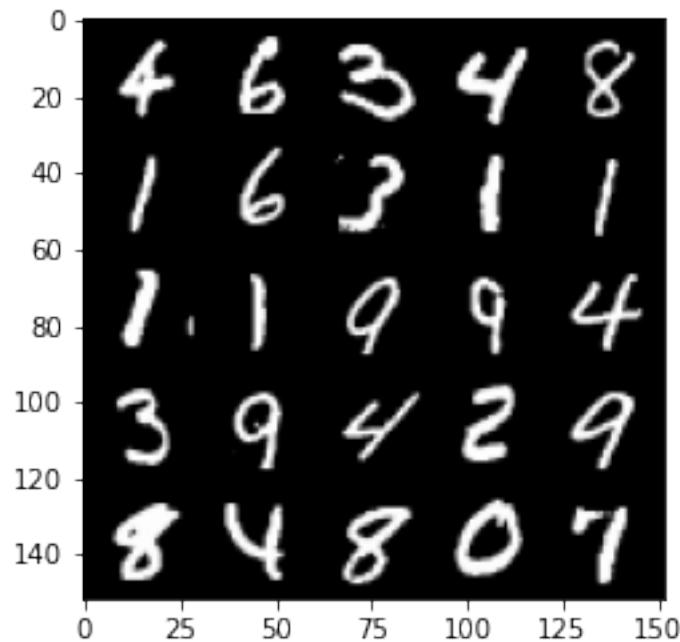




```
100%|      | 469/469 [00:13<00:00, 34.35it/s]
69%|      | 322/469 [00:09<00:04, 36.44it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

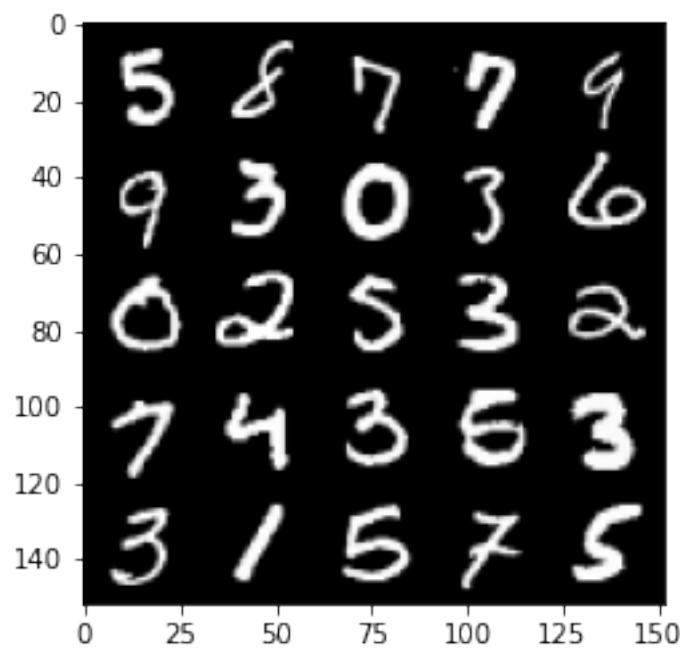
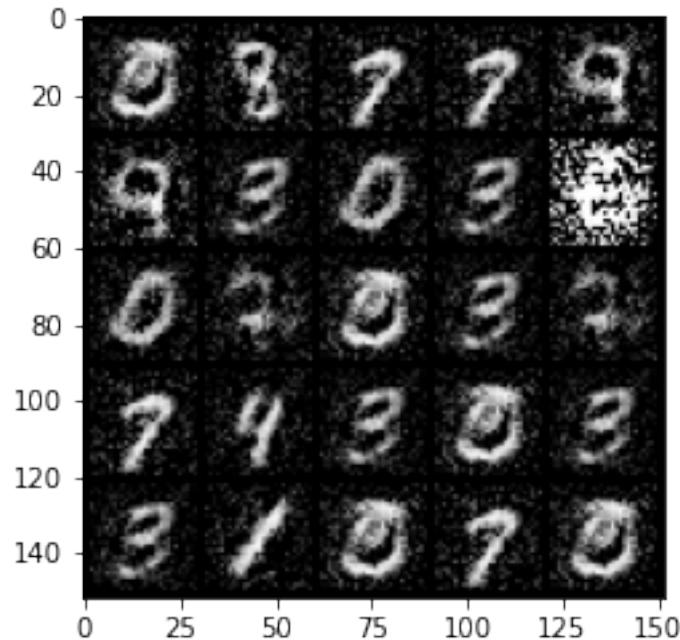
Epoch 462, step 217000 -> generator loss: 0.4753843746781349, discriminator loss: 0.6587379182577128





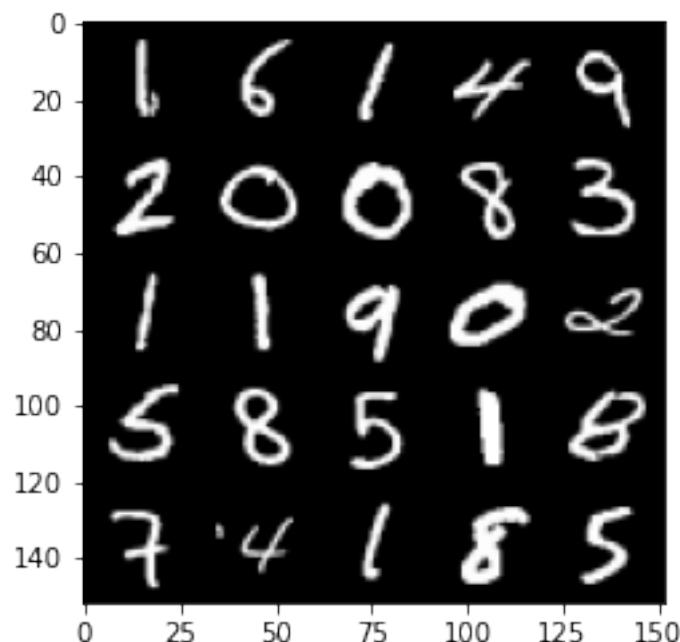
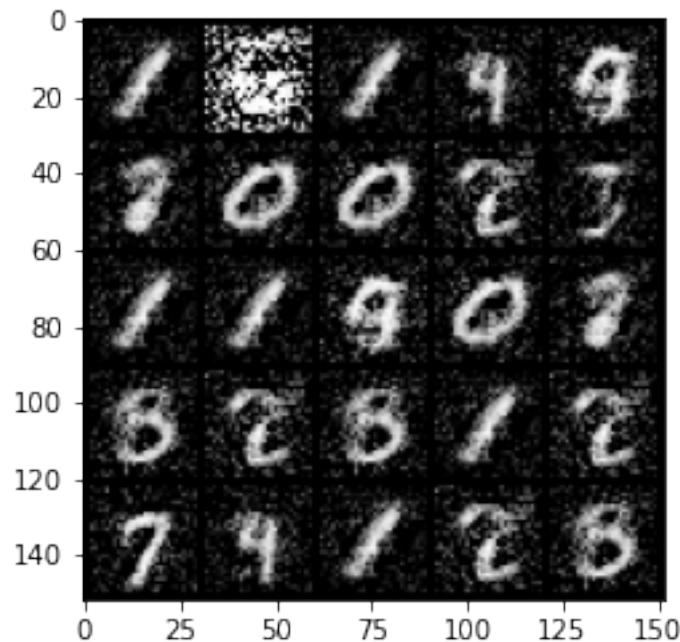
```
100% | 469/469 [00:13<00:00, 34.35it/s]
75% | 351/469 [00:09<00:03, 35.83it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 463, step 217500 -> generator loss: 0.4879232083559034, discriminator
loss: 0.6418367093801497
```



```
100%|      | 469/469 [00:13<00:00, 34.31it/s]
82%|      | 384/469 [00:10<00:02, 35.87it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

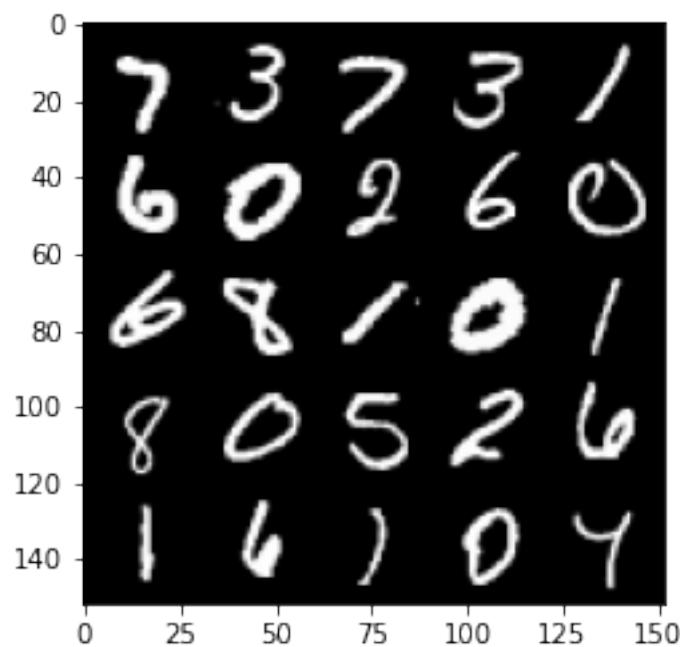
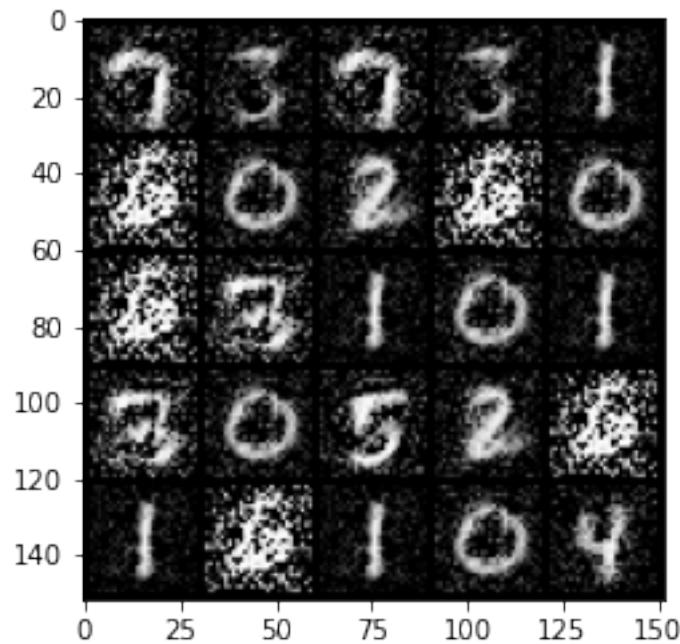
Epoch 464, step 218000 -> generator loss: 0.49326290261745404, discriminator loss: 0.6344520618319514



100% | 469/469 [00:13<00:00, 34.30it/s]

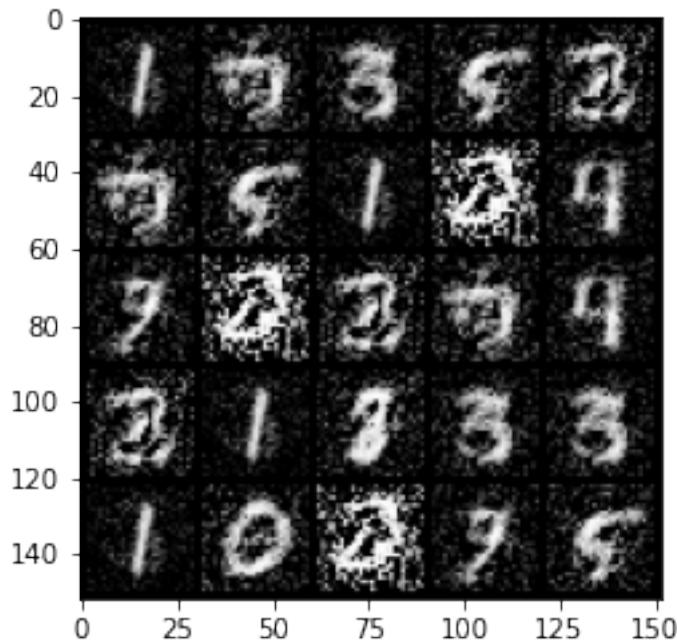
88%| 412/469 [00:11<00:01, 36.60it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

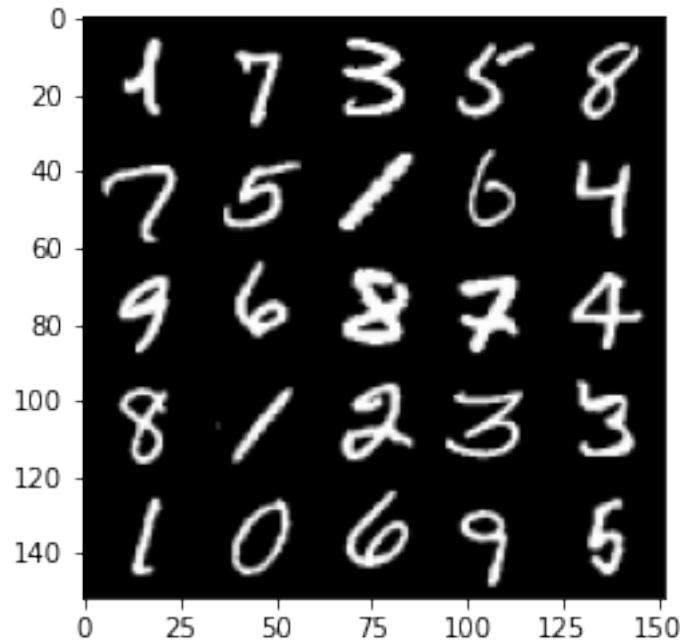
Epoch 465, step 218500 -> generator loss: 0.4913515159487723, discriminator loss: 0.6397261044979099



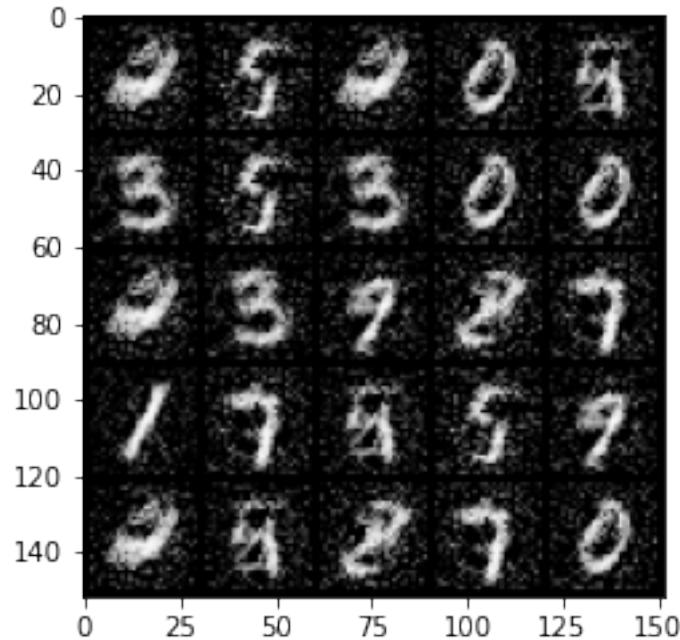
```
100%|     | 469/469 [00:13<00:00, 34.43it/s]
94%|     | 443/469 [00:12<00:00, 36.46it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

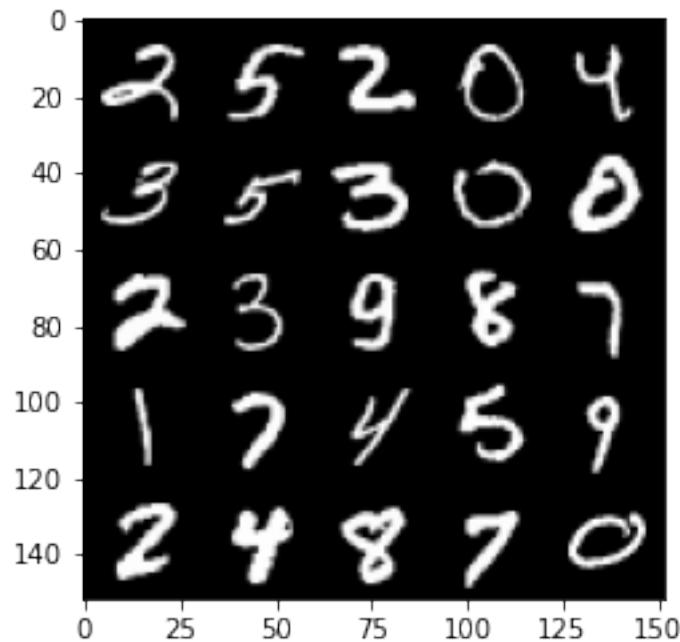
Epoch 466, step 219000 -> generator loss: 0.48415059173107133, discriminator loss: 0.646586887955665



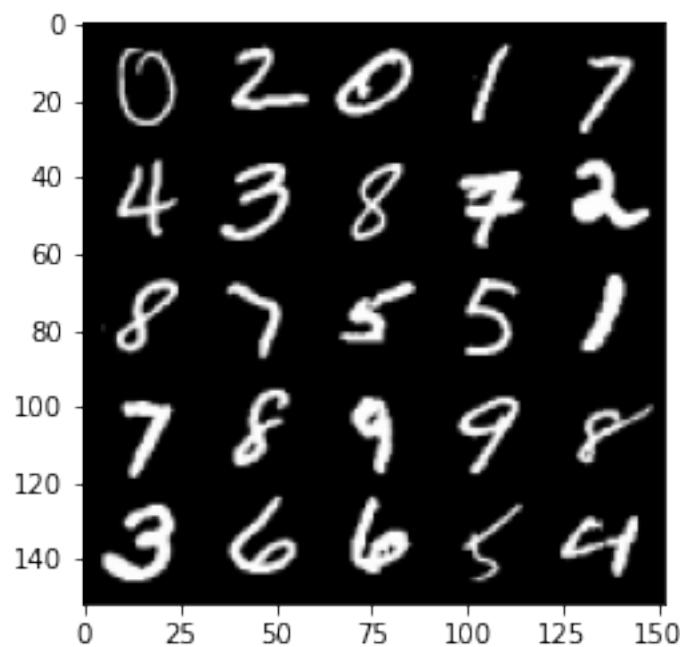
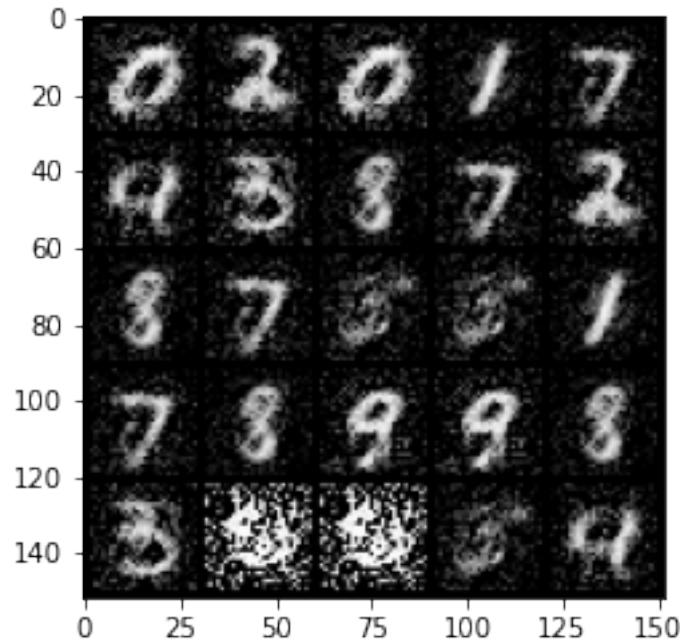


```
100%|    | 469/469 [00:13<00:00, 34.38it/s]
100%|    | 469/469 [00:13<00:00, 35.54it/s]
 1%|    | 7/469 [00:00<00:14, 31.92it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 468, step 219500 -> generator loss: 0.49320441693067596, discriminator
loss: 0.6314750850200651
```





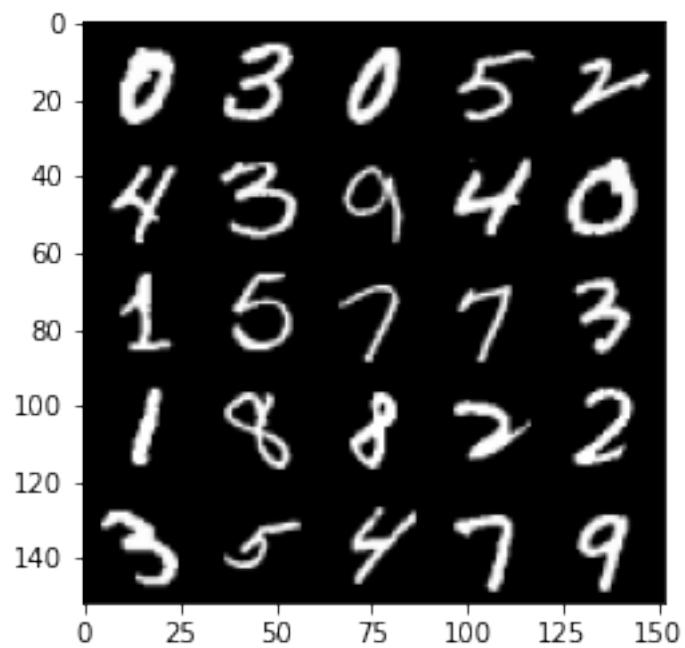
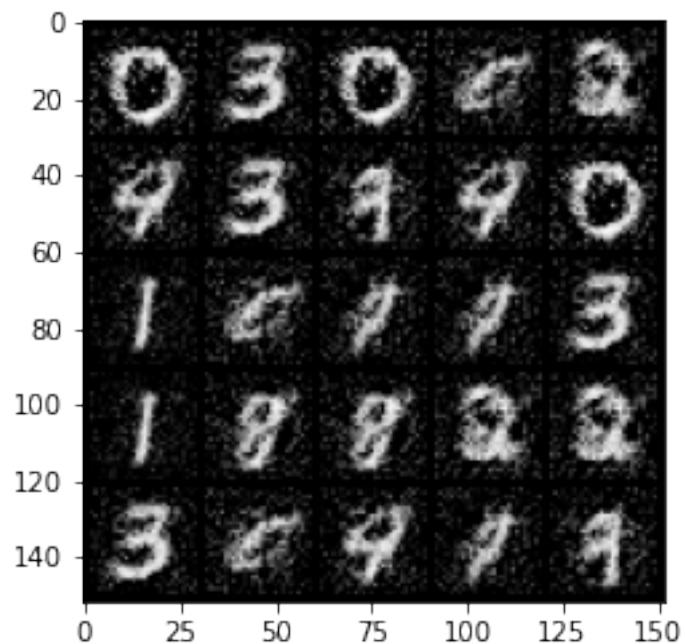
```
100%| 469/469 [00:13<00:00, 34.42it/s]
 8%| 38/469 [00:01<00:11, 36.02it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 469, step 220000 -> generator loss: 0.47852841281890834, discriminator
loss: 0.6569853192567823
```



```
100% | 469/469 [00:13<00:00, 34.48it/s]
14% | 67/469 [00:01<00:11, 33.62it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

Epoch 470, step 220500 -> generator loss: 0.4716041013598441, discriminator

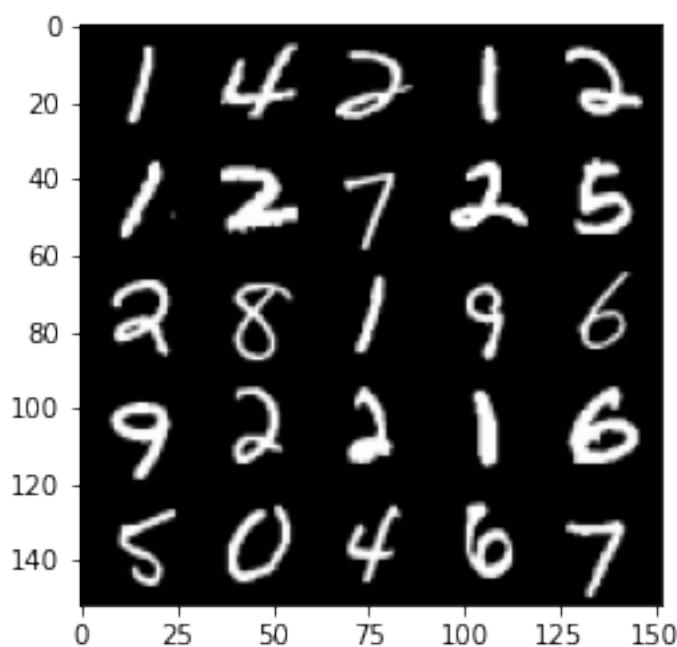
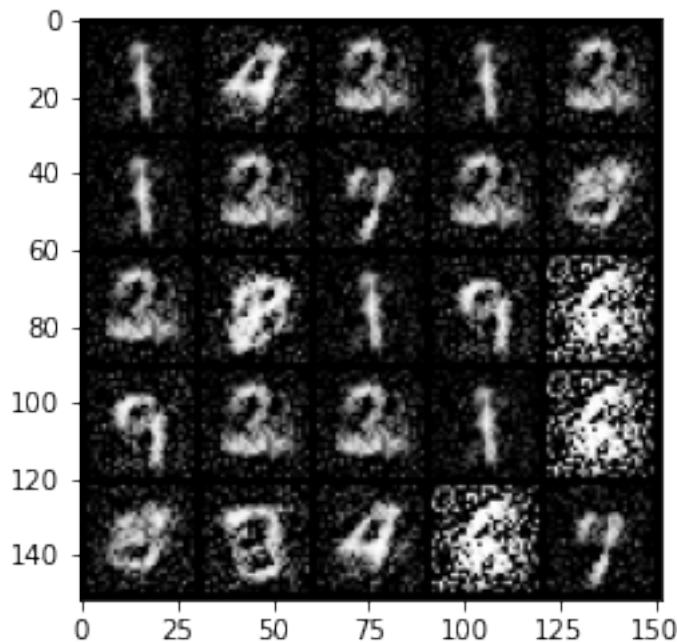
loss: 0.6686485266685486



100% | 469/469 [00:13<00:00, 34.46it/s]  
21% | 98/469 [00:02<00:10, 36.34it/s] Clipping input data to the valid

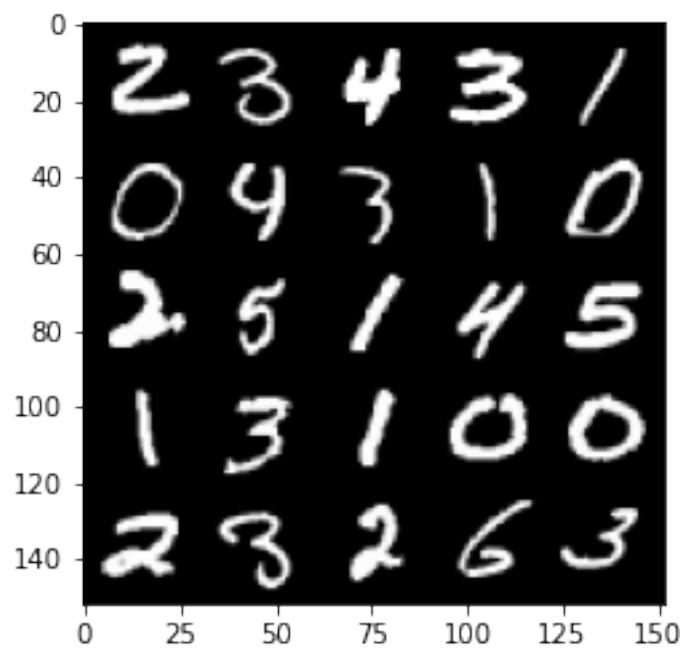
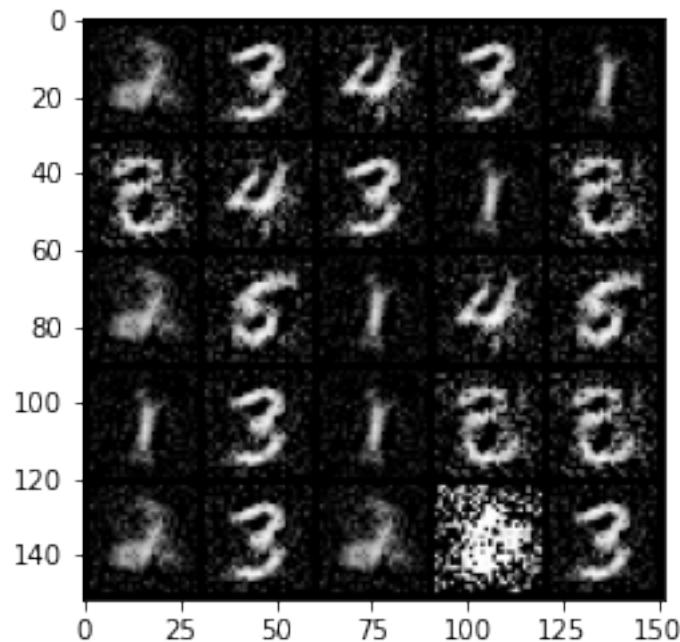
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 471, step 221000 -> generator loss: 0.48711779874563177, discriminator loss: 0.6485997273921972



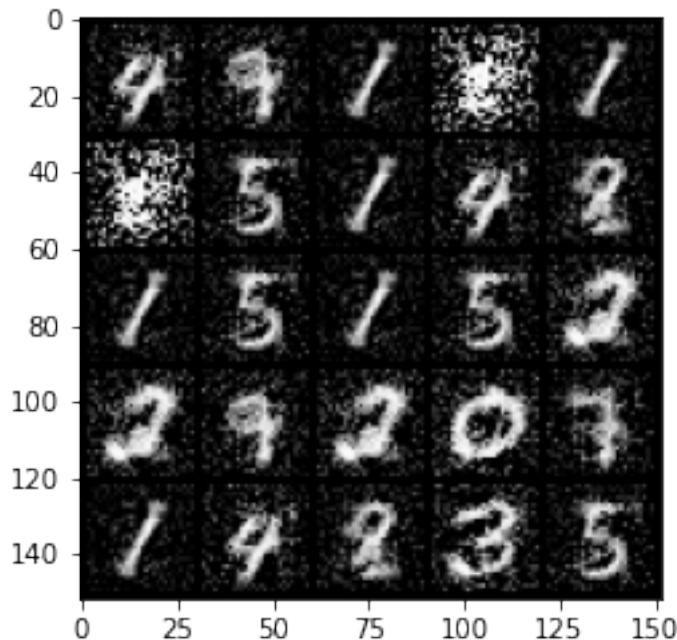
```
100%| 469/469 [00:13<00:00, 34.23it/s]
28%| 132/469 [00:03<00:09, 36.62it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

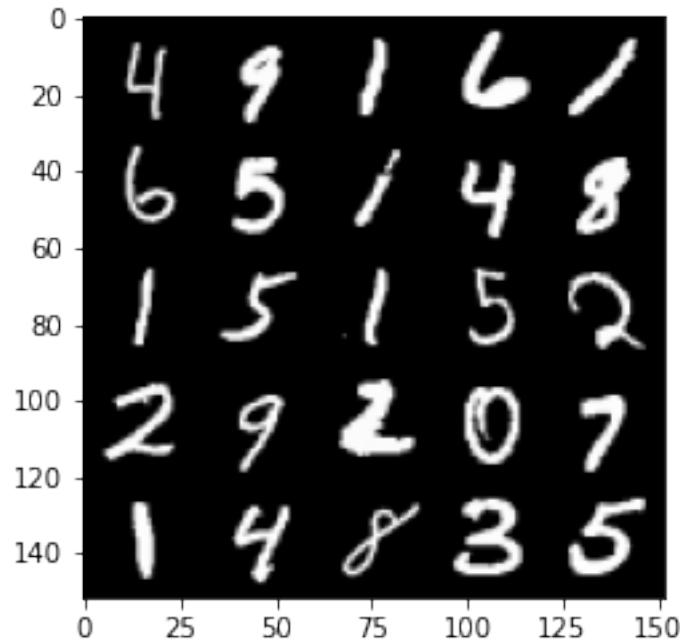
Epoch 472, step 221500 -> generator loss: 0.498788073480129, discriminator loss: 0.6276481753587722



```
100%|      | 469/469 [00:13<00:00, 34.12it/s]
35%|      | 162/469 [00:04<00:08, 36.12it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

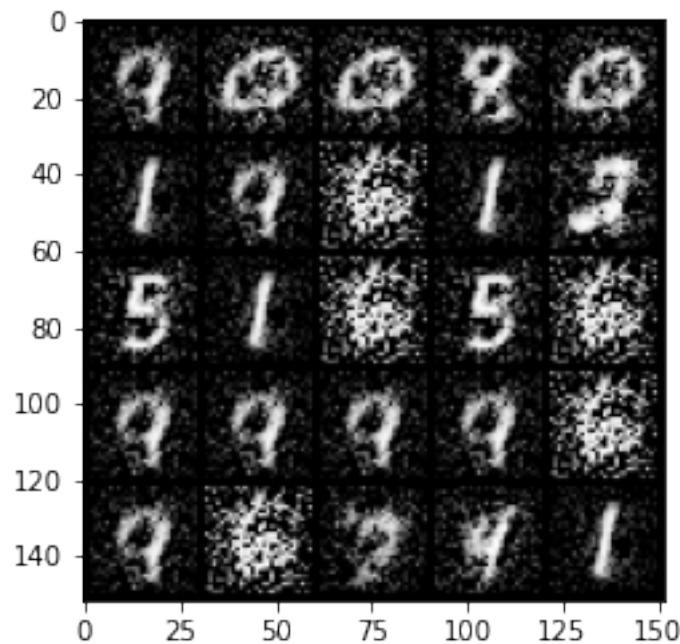
Epoch 473, step 222000 -> generator loss: 0.49008475852012595, discriminator loss: 0.6608245807886128

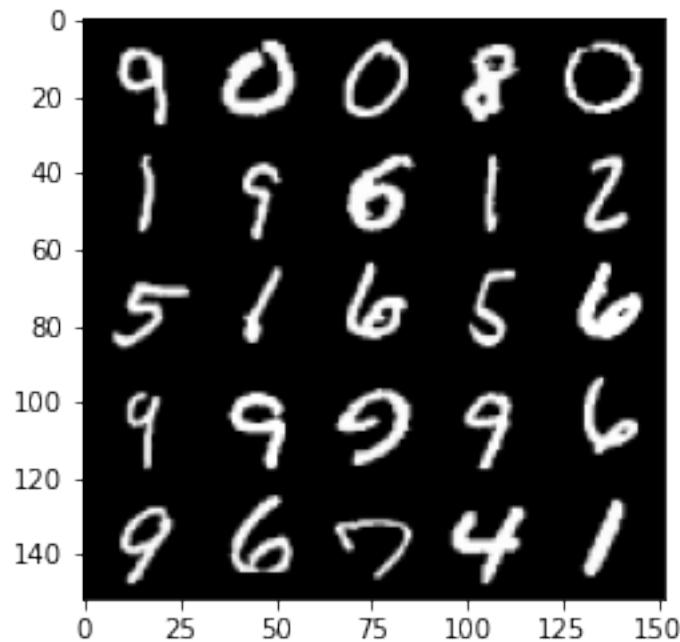




```
100% | 469/469 [00:13<00:00, 33.55it/s]
41% | 191/469 [00:05<00:07, 36.03it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

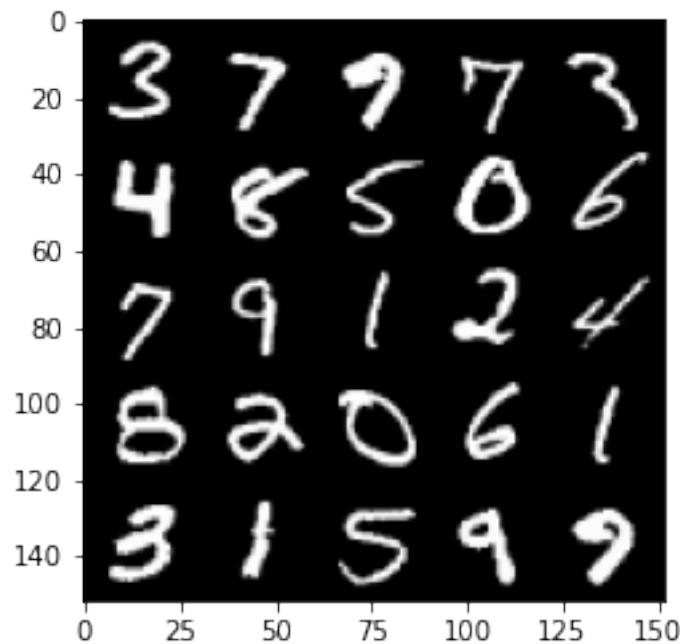
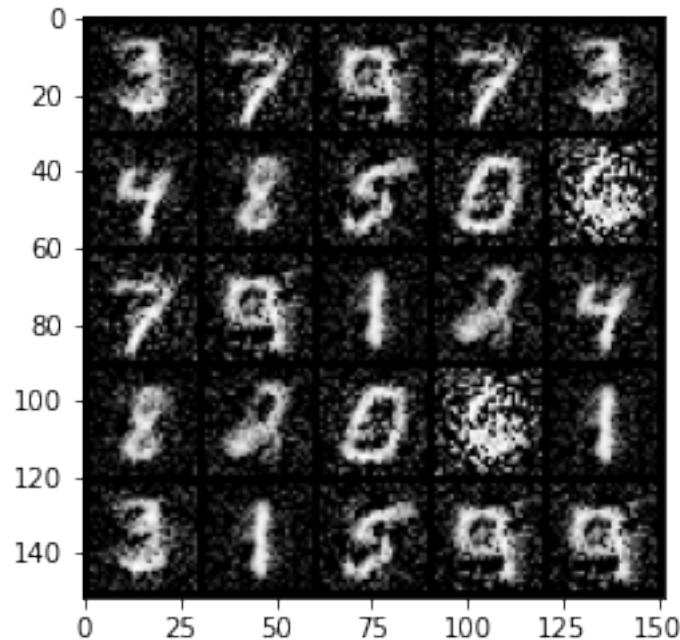
Epoch 474, step 222500 -> generator loss: 0.48931254476308855, discriminator loss: 0.6427971961498268





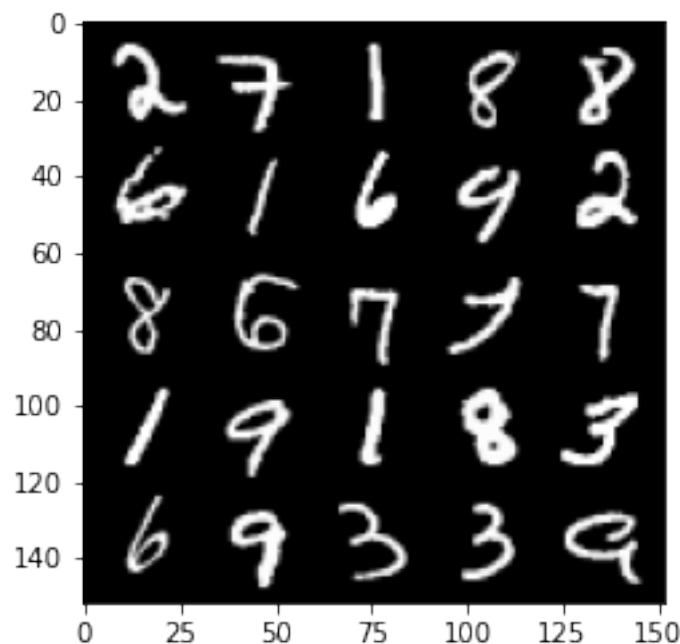
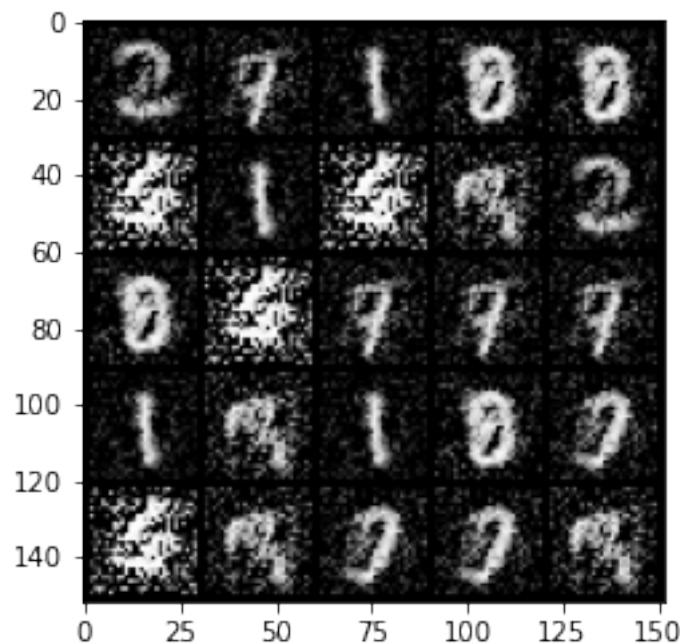
```
100% | 469/469 [00:13<00:00, 34.48it/s]
48% | 224/469 [00:06<00:06, 36.48it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

Epoch 475, step 223000 -> generator loss: 0.47980563539266613, discriminator loss: 0.6637978569269177



100% | 469/469 [00:14<00:00, 33.43it/s]  
54% | 255/469 [00:07<00:05, 36.13it/s] Clipping input data to the  
valid range for imshow with RGB data ([0..1] for floats or [0..255] for  
integers).

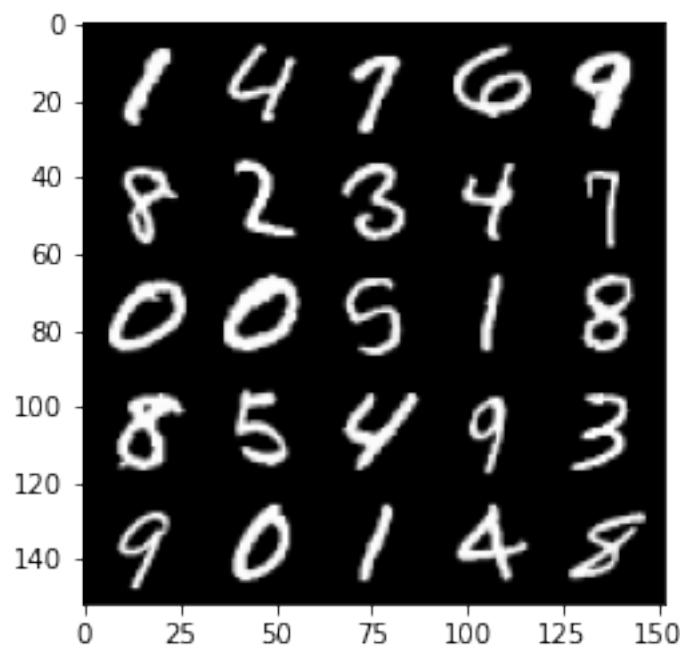
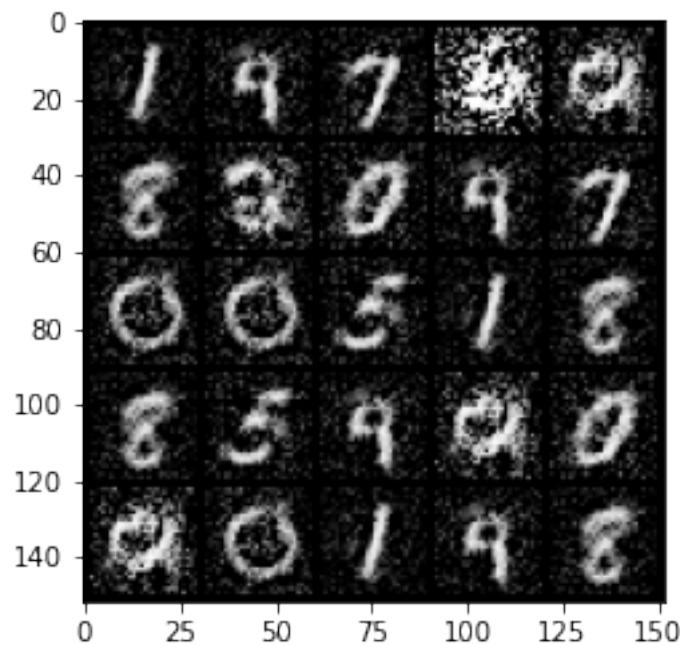
Epoch 476, step 223500 -> generator loss: 0.478701258838177, discriminator loss: 0.6582780042886733



100% | 469/469 [00:13<00:00, 34.39it/s]

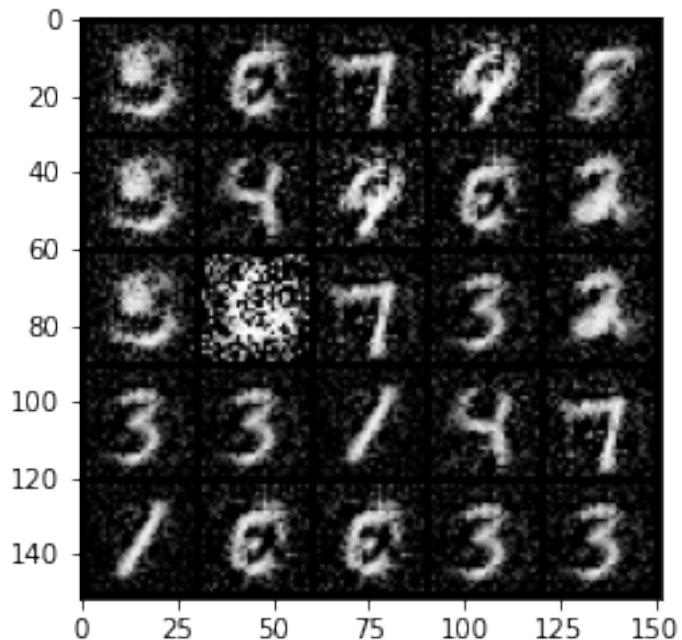
61%| 287/469 [00:08<00:05, 35.52it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

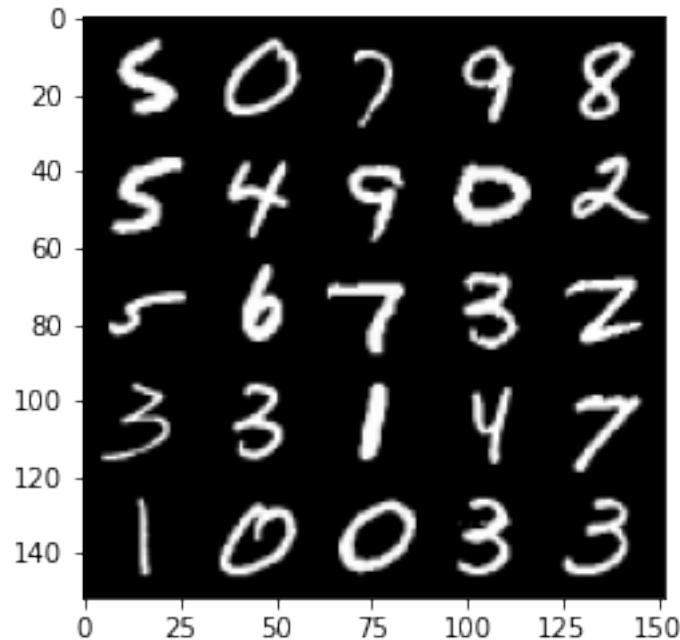
Epoch 477, step 224000 -> generator loss: 0.4926119037866594, discriminator loss: 0.6393358810544018



```
100%|      | 469/469 [00:13<00:00, 33.62it/s]
67%|      | 315/469 [00:08<00:04, 35.81it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

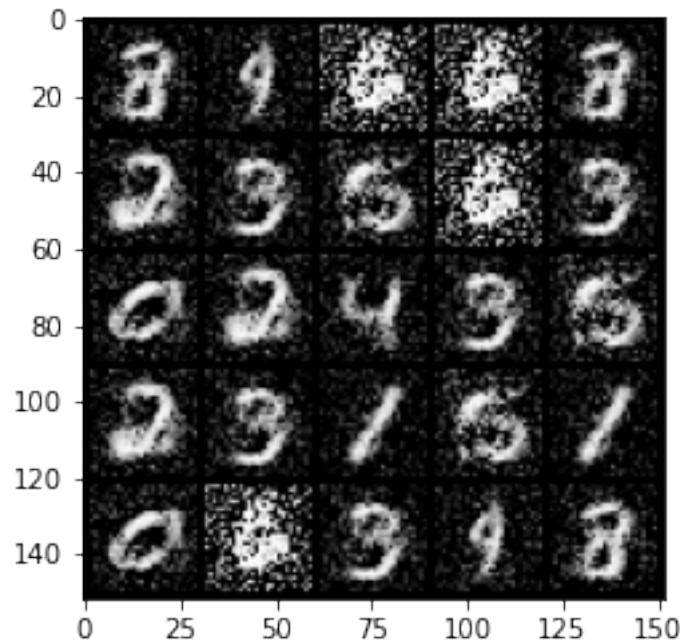
Epoch 478, step 224500 -> generator loss: 0.4799547654390339, discriminator loss: 0.6548894895315174

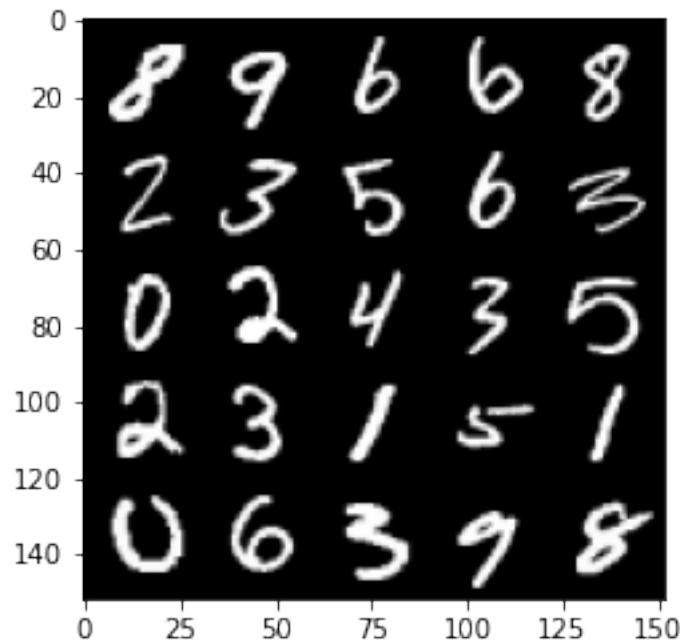




```
100%|      | 469/469 [00:13<00:00, 34.58it/s]
74%|      | 347/469 [00:09<00:03, 35.44it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

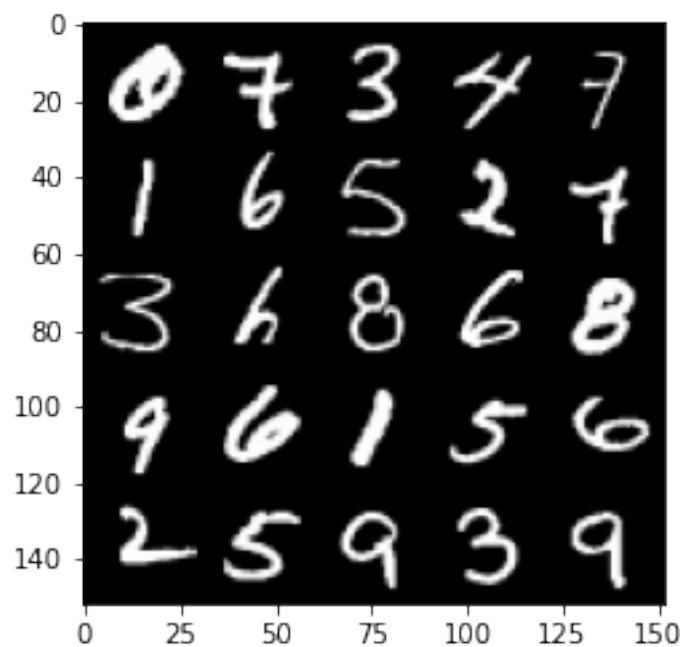
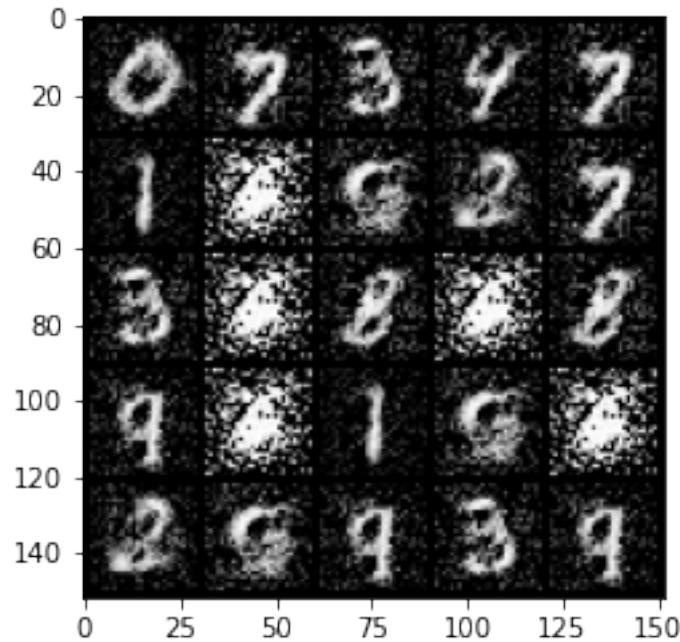
Epoch 479, step 225000 -> generator loss: 0.4851613091230388, discriminator loss: 0.6504299178123474





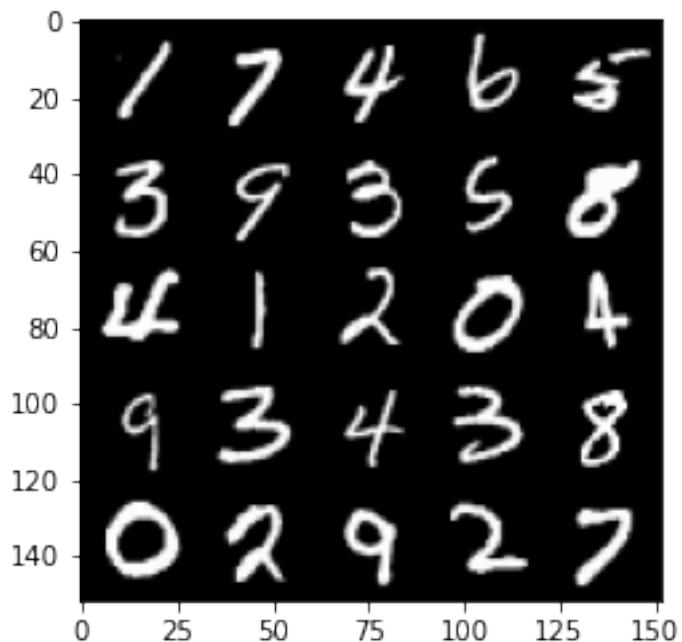
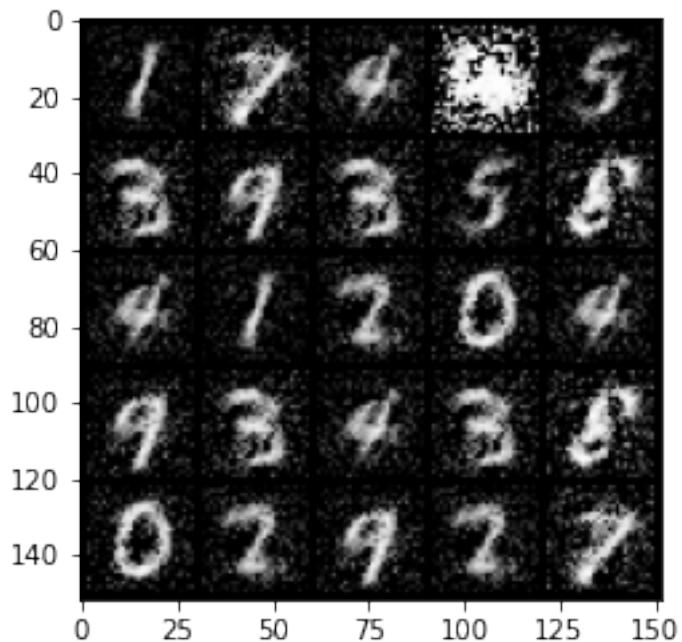
```
100% | 469/469 [00:13<00:00, 34.45it/s]
81% | 380/469 [00:10<00:02, 35.17it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 480, step 225500 -> generator loss: 0.4778234399557114, discriminator
loss: 0.6593723669052132
```



```
100%| 469/469 [00:13<00:00, 34.49it/s]
88%| 411/469 [00:11<00:01, 34.34it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

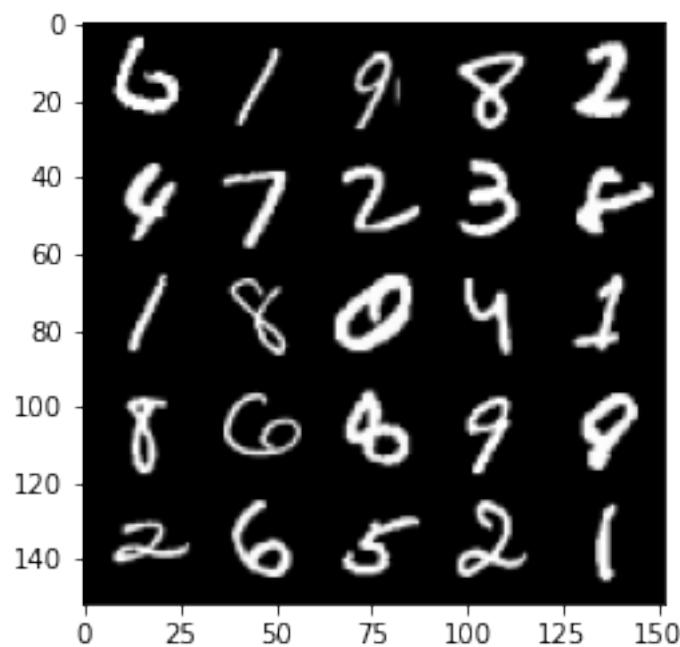
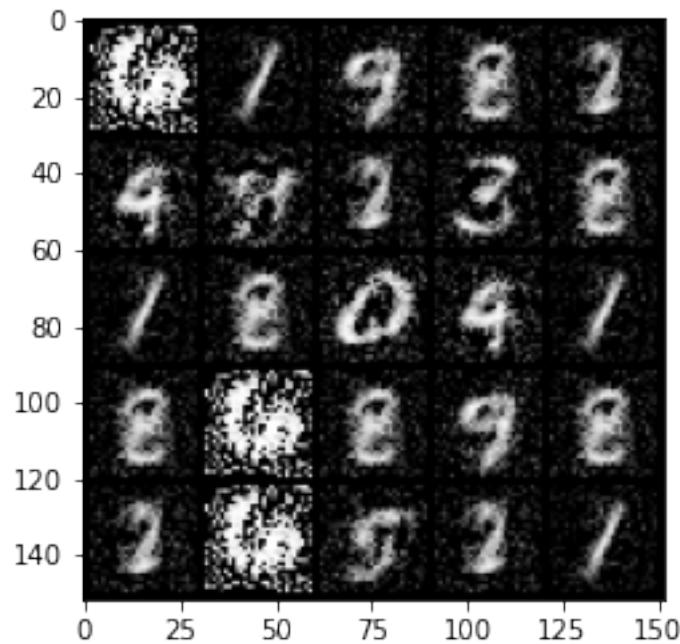
Epoch 481, step 226000 -> generator loss: 0.4825922443866729, discriminator loss: 0.6454449148178104



100% | 469/469 [00:13<00:00, 34.61it/s]

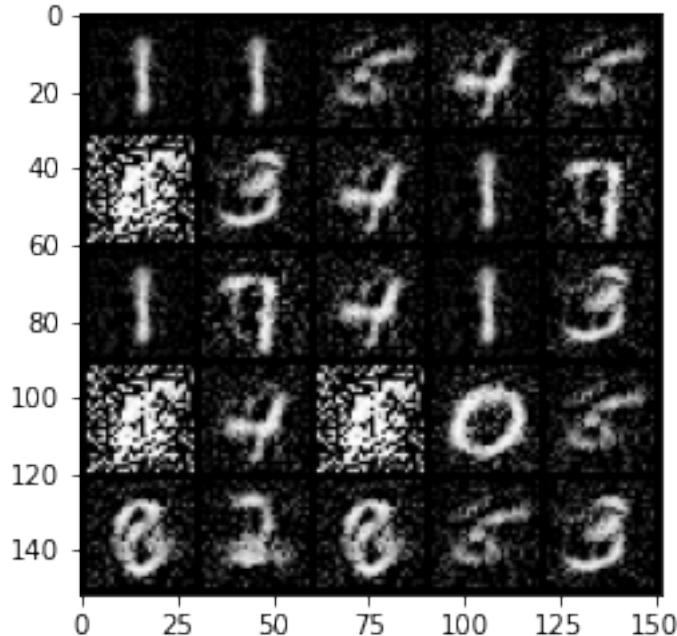
94%| 439/469 [00:12<00:00, 36.25it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

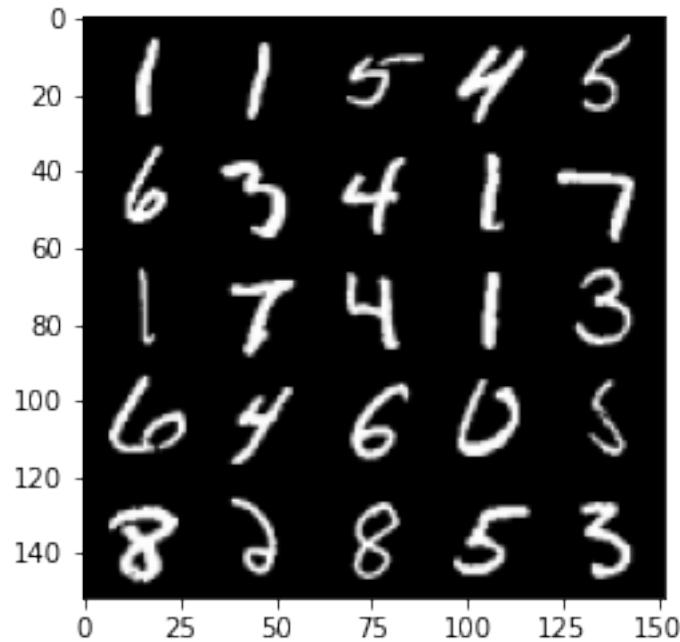
Epoch 482, step 226500 -> generator loss: 0.49263048940897, discriminator loss: 0.6304431461095807



```
100%|    | 469/469 [00:13<00:00, 34.28it/s]
100%|    | 469/469 [00:13<00:00, 35.61it/s]
  1%|    | 3/469 [00:00<00:17, 26.39it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

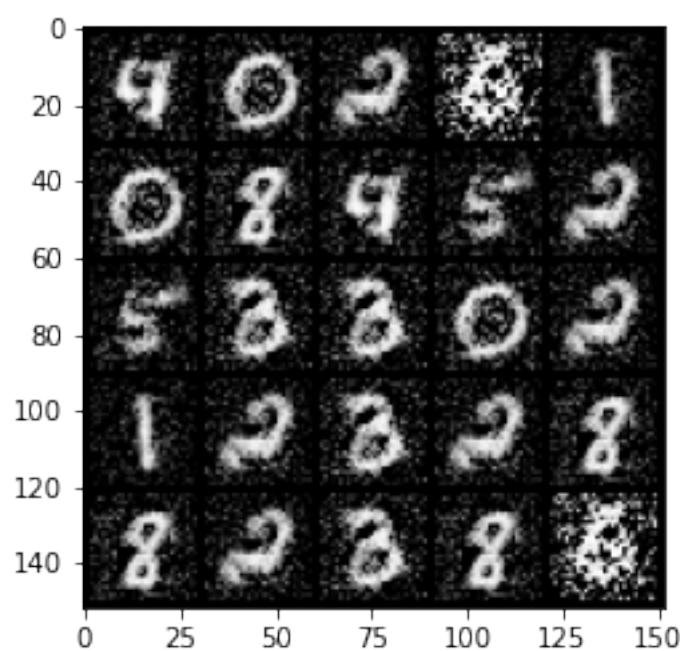
Epoch 484, step 227000 -> generator loss: 0.4791515664458277, discriminator loss: 0.6665400484800336

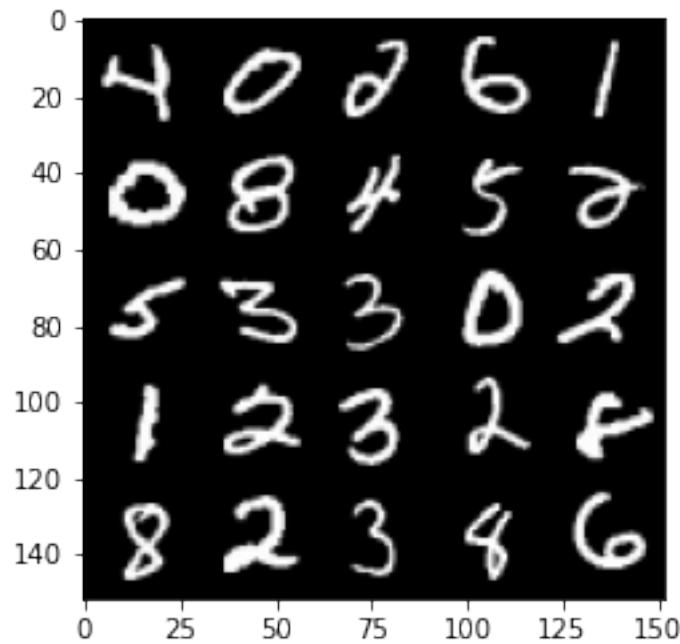




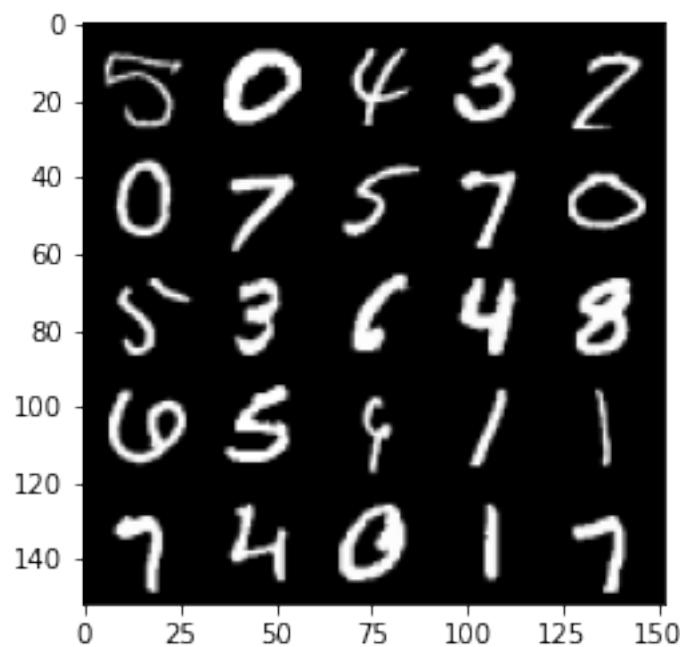
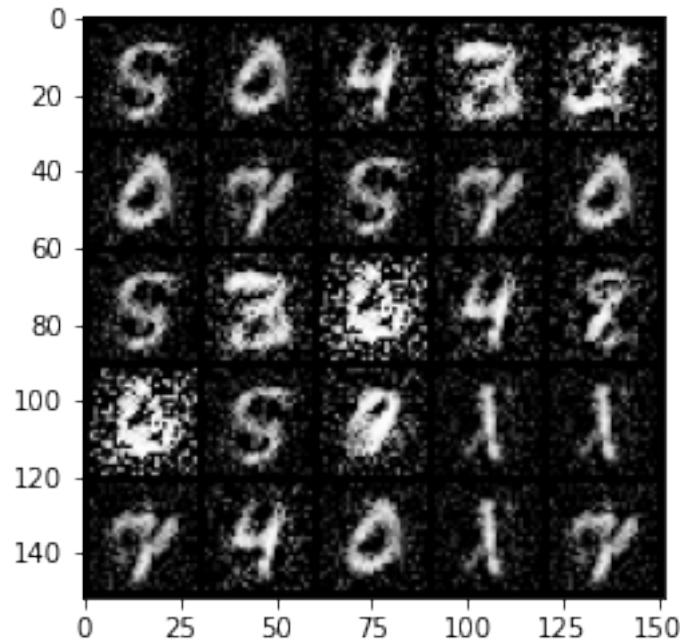
```
100%|      | 469/469 [00:13<00:00, 34.25it/s]
 7%|      | 32/469 [00:00<00:12, 35.47it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
```

```
Epoch 485, step 227500 -> generator loss: 0.4780166922807697, discriminator
loss: 0.6707461111545564
```





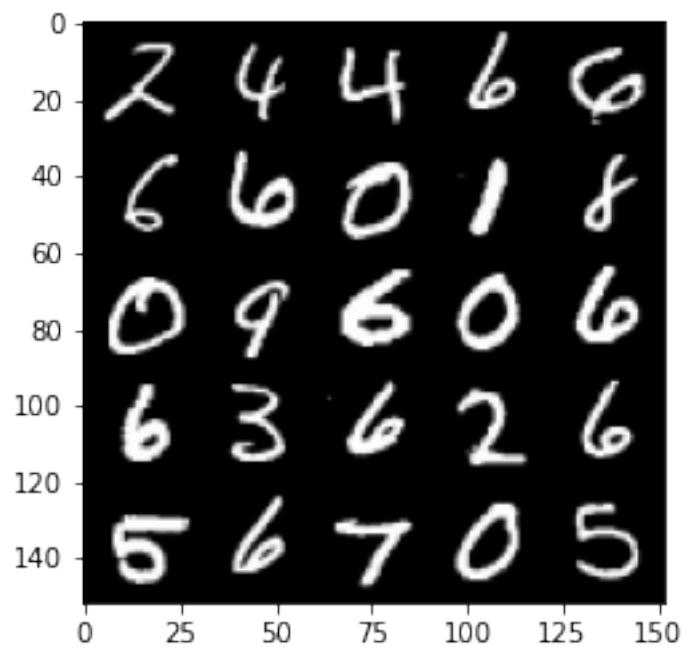
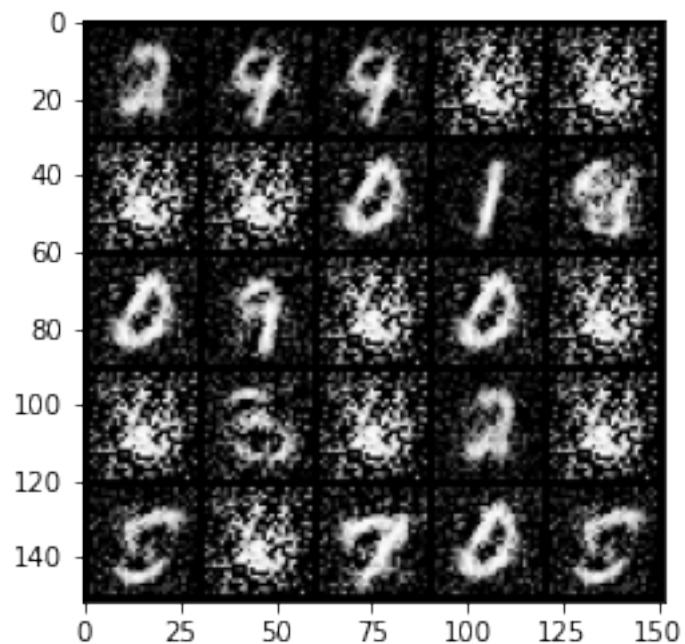
```
100%| 469/469 [00:13<00:00, 34.39it/s]
13%| 63/469 [00:01<00:12, 33.75it/s]Clipping input data to the valid
range for imshow with RGB data ([0..1] for floats or [0..255] for integers).
Epoch 486, step 228000 -> generator loss: 0.48005592399835567, discriminator
loss: 0.6609947856664662
```



100% | 469/469 [00:13<00:00, 33.78it/s]  
20% | 95/469 [00:02<00:11, 31.92it/s] Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 487, step 228500 -> generator loss: 0.4934768692851068, discriminator

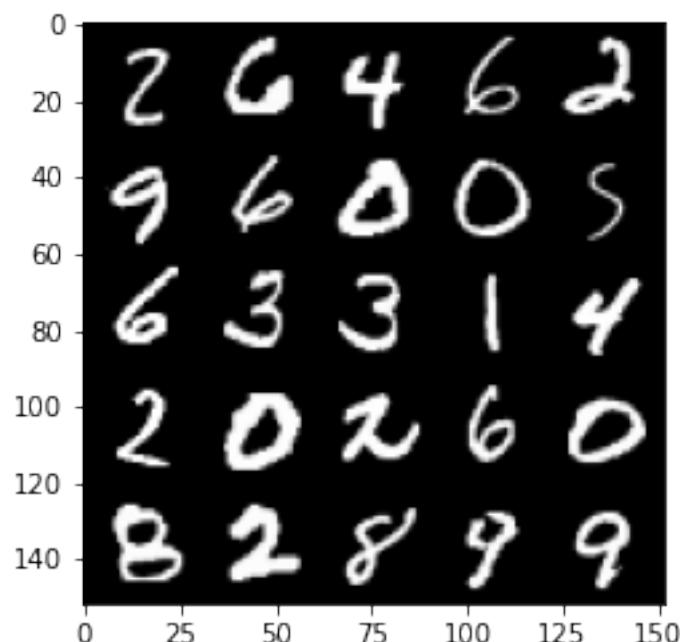
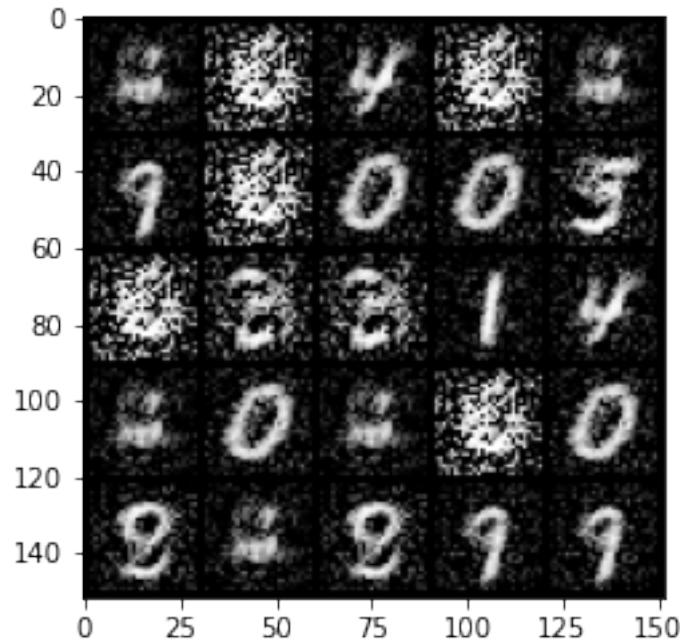
loss: 0.6354333599805833



100% | 469/469 [00:13<00:00, 34.33it/s]  
27% | 128/469 [00:03<00:09, 35.67it/s] Clipping input data to the

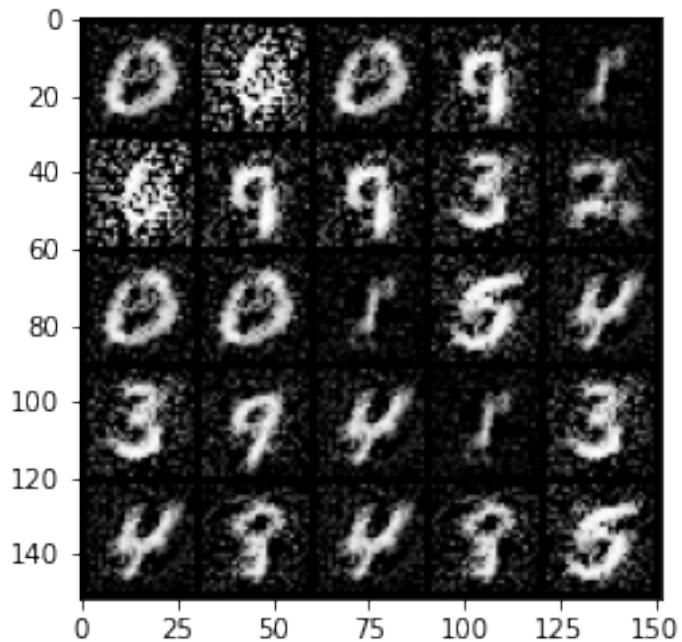
valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

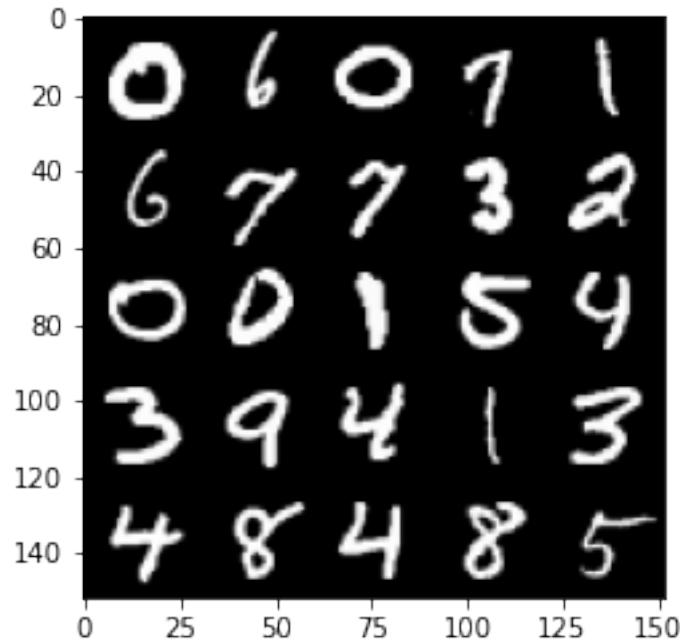
Epoch 488, step 229000 -> generator loss: 0.48563884896039994, discriminator loss: 0.6481279865503313



```
100%|      | 469/469 [00:13<00:00, 34.35it/s]
34%|      | 159/469 [00:04<00:08, 35.69it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

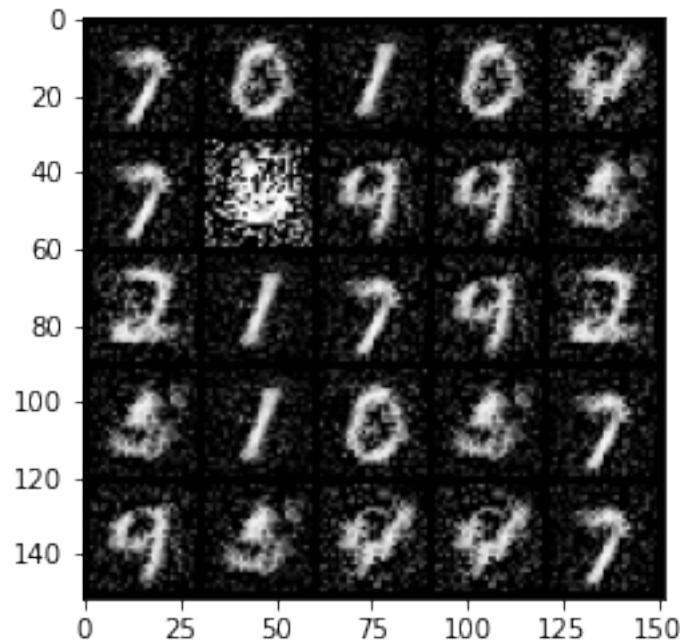
```
Epoch 489, step 229500 -> generator loss: 0.4893591349124906, discriminator
loss: 0.6425551913976664
```

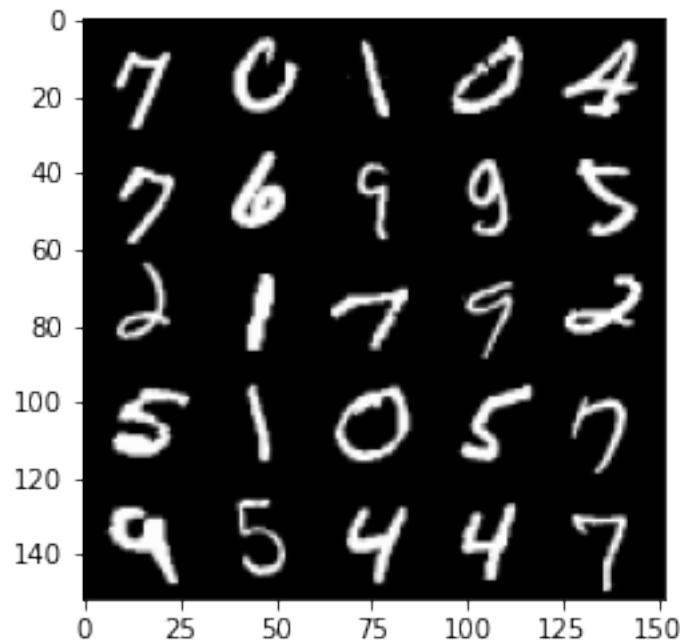




```
100%|      | 469/469 [00:13<00:00, 34.69it/s]
40%|      | 187/469 [00:05<00:07, 36.13it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

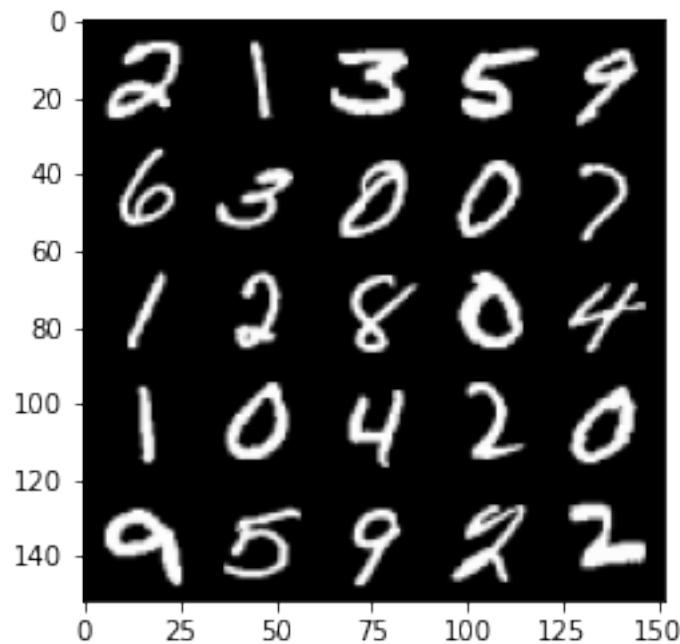
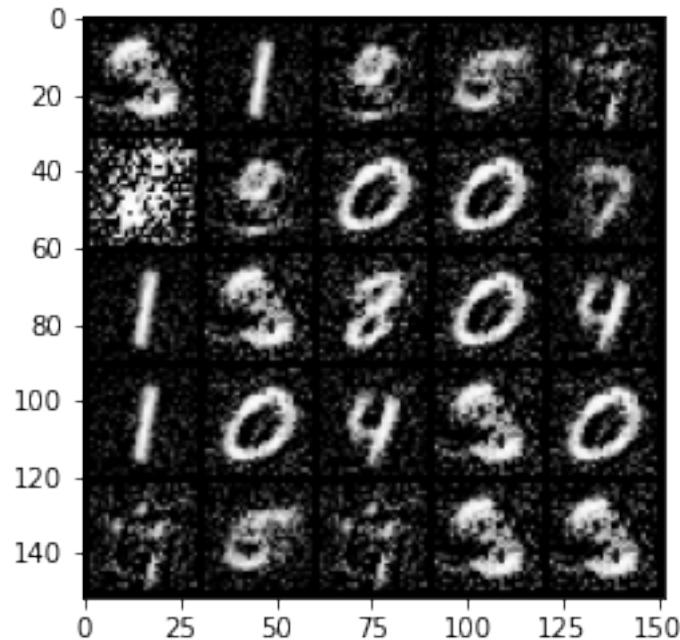
Epoch 490, step 230000 -> generator loss: 0.4859773650169371, discriminator loss: 0.6610853502750397





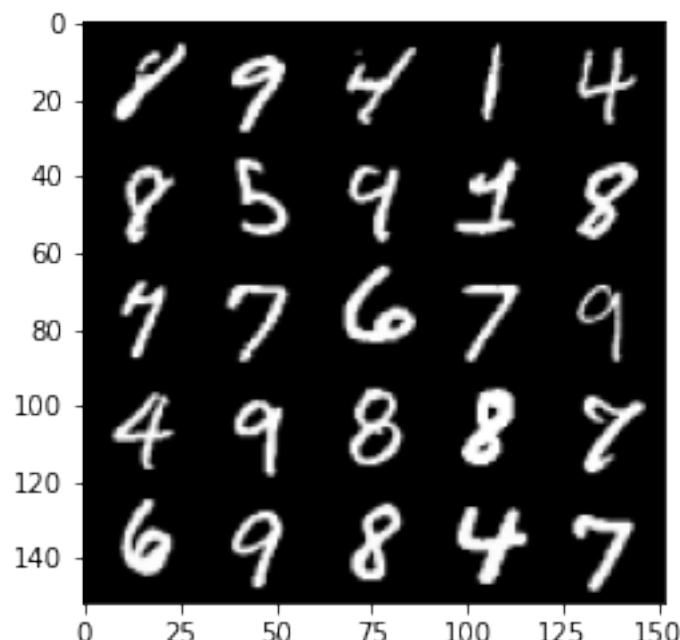
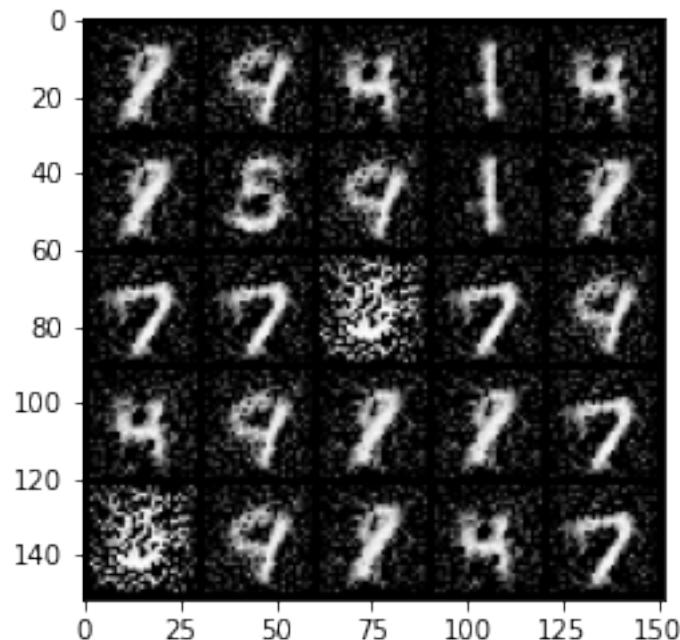
```
100% | 469/469 [00:13<00:00, 34.50it/s]
47% | 220/469 [00:06<00:06, 35.61it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 491, step 230500 -> generator loss: 0.47918930029869145, discriminator
loss: 0.6591489777564996
```



```
100%|      | 469/469 [00:13<00:00, 34.56it/s]
54%|      | 252/469 [00:07<00:06, 35.86it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

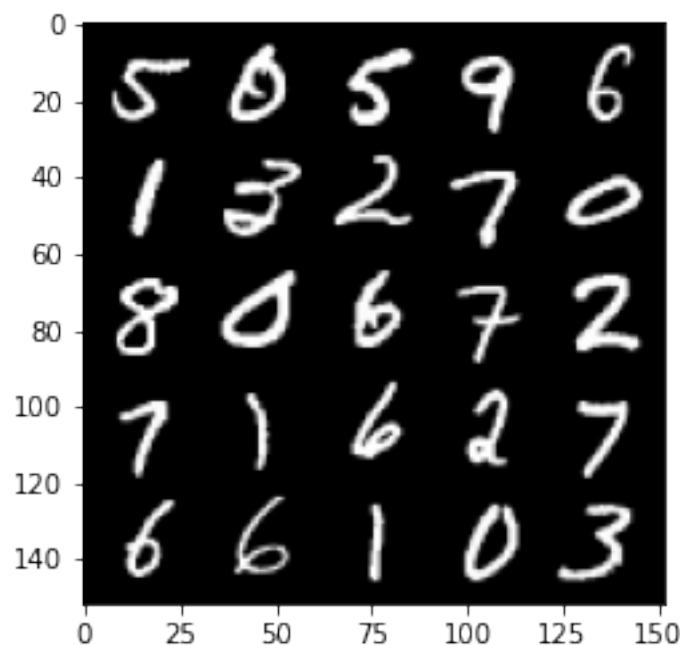
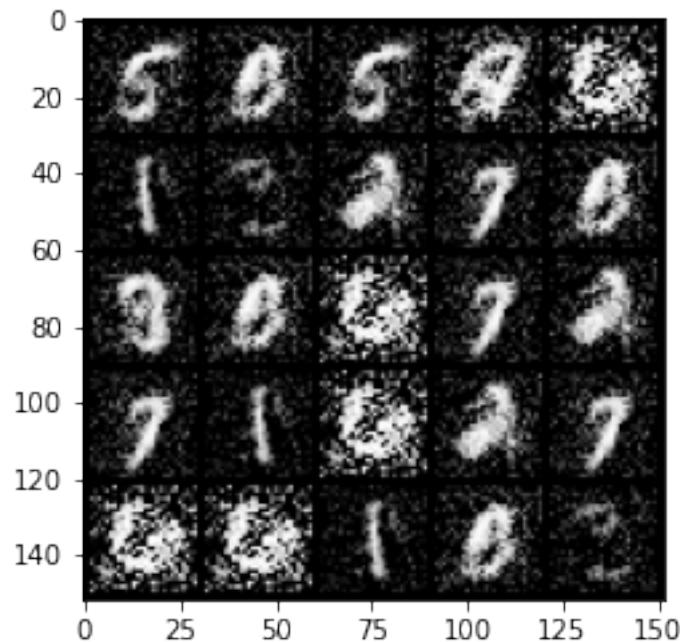
Epoch 492, step 231000 -> generator loss: 0.49873703867197056, discriminator loss: 0.6277285236120227



100% | 469/469 [00:13<00:00, 34.29it/s]

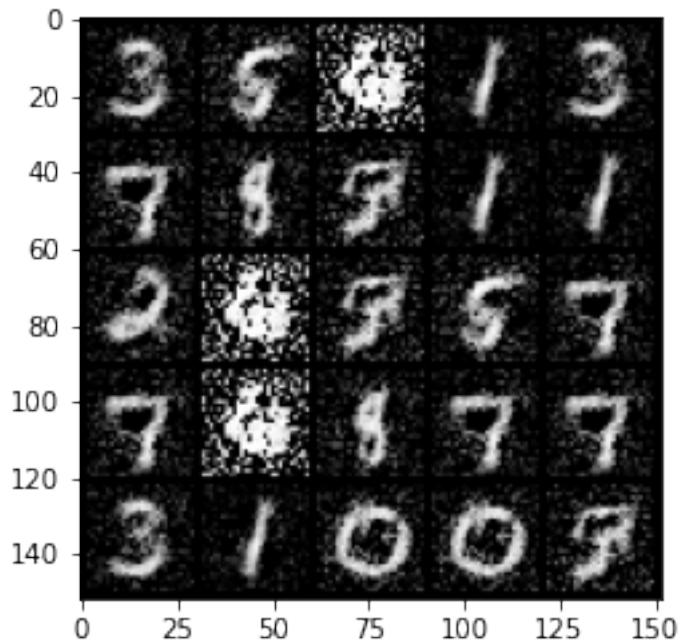
60%| 280/469 [00:07<00:05, 34.55it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

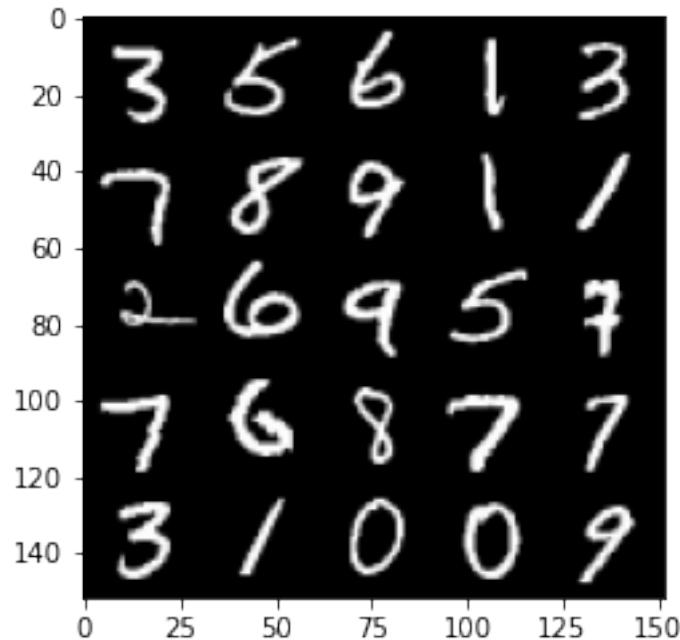
Epoch 493, step 231500 -> generator loss: 0.4855632973313331, discriminator loss: 0.6590794156789788



```
100%|      | 469/469 [00:13<00:00, 34.42it/s]
66%|      | 311/469 [00:08<00:04, 35.87it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

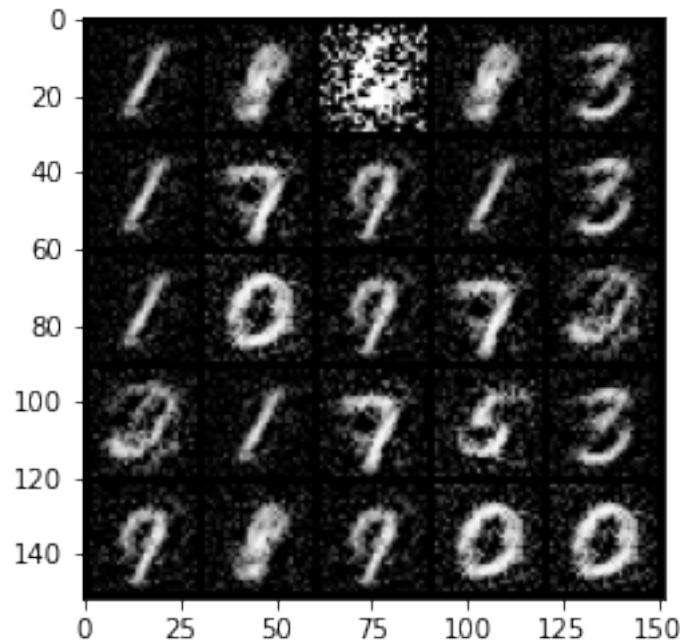
Epoch 494, step 232000 -> generator loss: 0.494312200963497, discriminator loss:  
0.6364371393918988

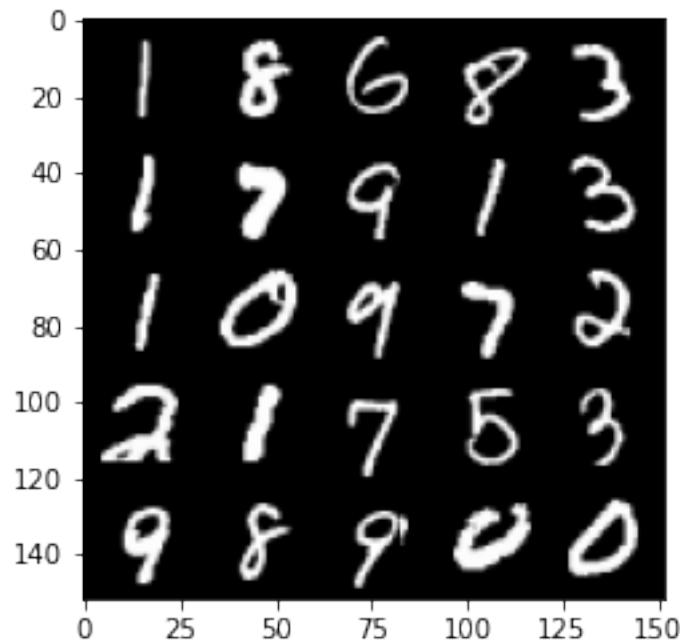




```
100%|      | 469/469 [00:13<00:00, 34.06it/s]
73%|      | 343/469 [00:09<00:03, 35.60it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

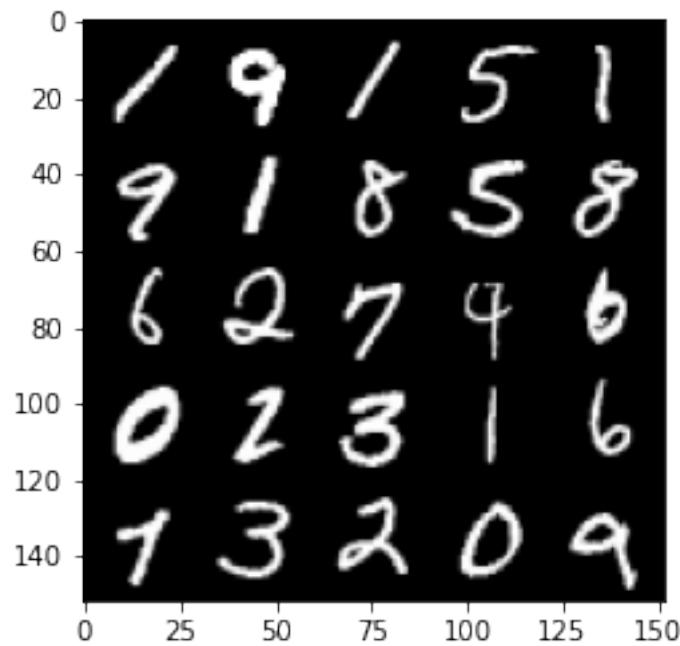
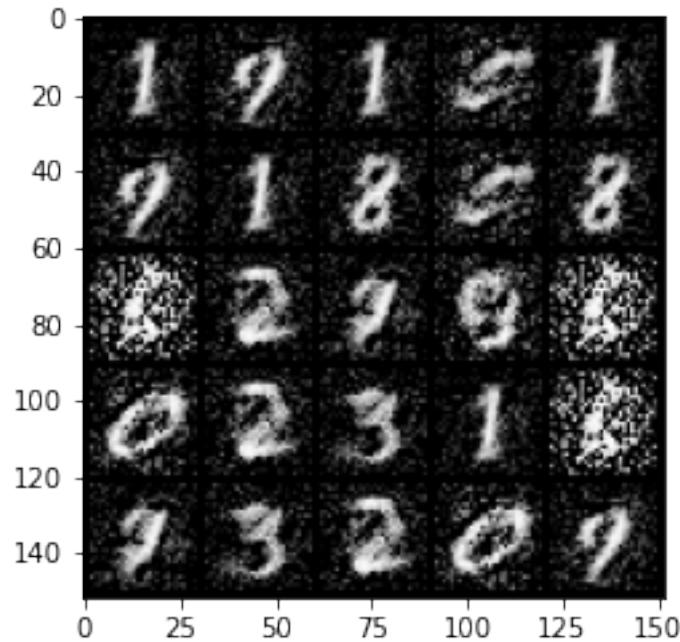
Epoch 495, step 232500 -> generator loss: 0.49596214544773043, discriminator loss: 0.6343523075580596





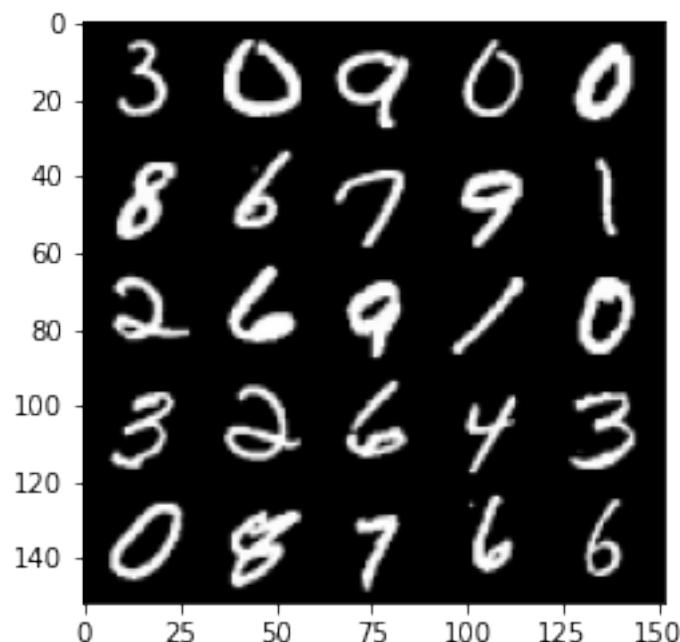
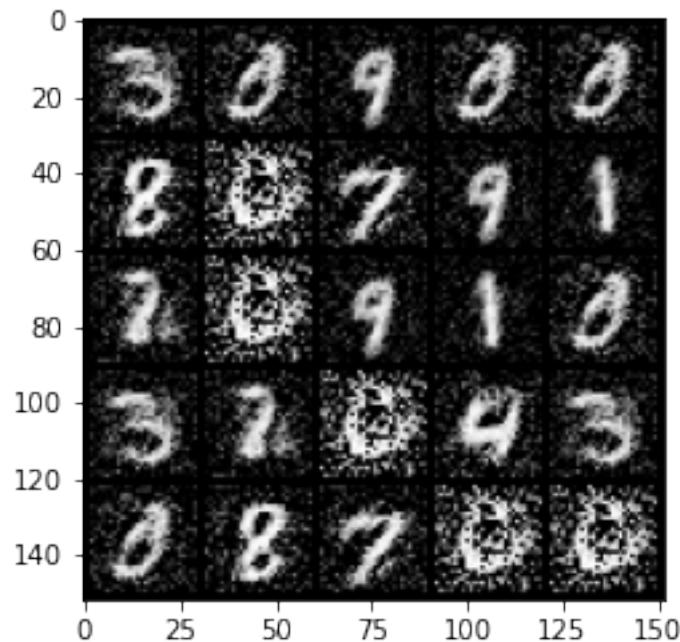
```
100% | 469/469 [00:13<00:00, 34.26it/s]
80% | 374/469 [00:10<00:02, 35.00it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

```
Epoch 496, step 233000 -> generator loss: 0.483587142586708, discriminator loss:
0.6505470876693722
```



```
100%|      | 469/469 [00:14<00:00, 32.74it/s]
87%|      | 406/469 [00:11<00:01, 35.68it/s]Clipping input data to the
valid range for imshow with RGB data ([0..1] for floats or [0..255] for
integers).
```

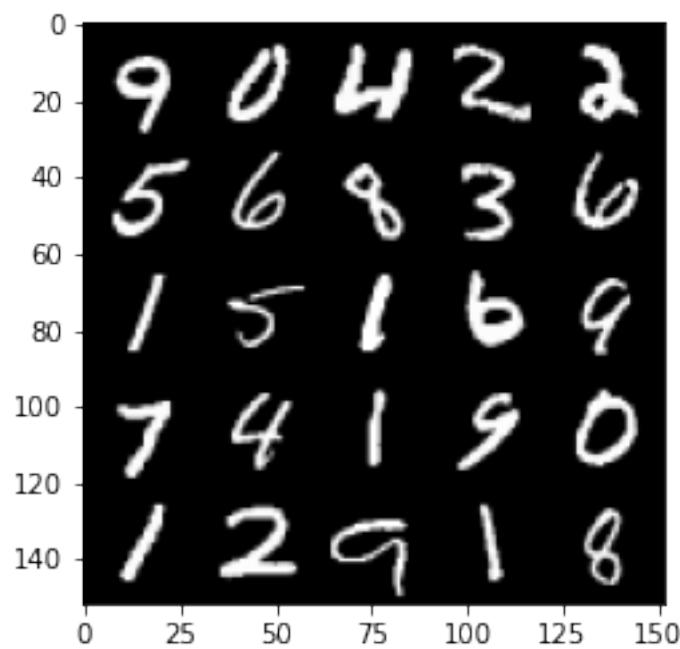
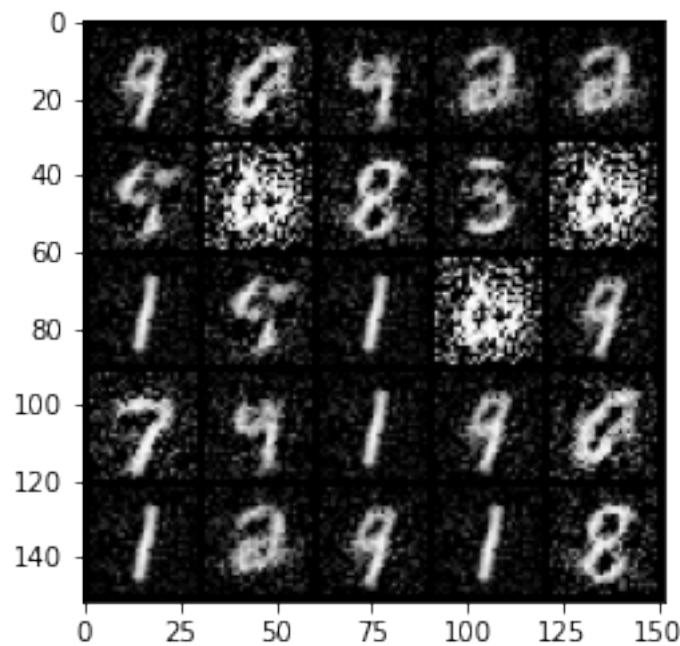
Epoch 497, step 233500 -> generator loss: 0.4904305155277253, discriminator loss: 0.6382746646404268



100% | 469/469 [00:14<00:00, 33.30it/s]

93%| 436/469 [00:12<00:00, 36.78it/s]Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).

Epoch 498, step 234000 -> generator loss: 0.4909907988309861, discriminator loss: 0.6369600787162781



```
100%| 469/469 [00:13<00:00, 34.64it/s]
100%| 469/469 [00:13<00:00, 35.66it/s]
```

## 2.3 Saving the model

In this step we will save this trained model for further usage and avoid spending 160+ minutes for training it.

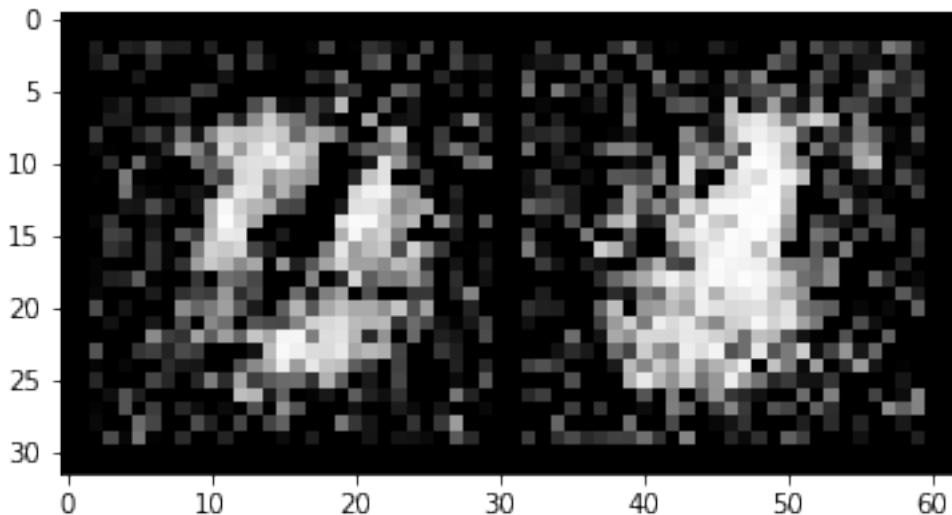
```
[ ]: torch.save(gen.state_dict(), 'models/CGAN-MNIST-Gen-v2.0.pth')
torch.save(disc.state_dict(), 'models/CGAN-MNIST-Disc-v2.0.pth')
```

## 2.4 Checking the quality of GAN

Lets generated 25 samples of images based on MNIST dataset trained with a very simple and shallow GAN.

```
[ ]: test_noise = get_noise(2, 64, device='cuda')
test_label = torch.tensor([1 for _ in range(2)], device='cuda')
generated_test = gen(test_noise, test_label)
show_tensor_images(generated_test)
```

Clipping input data to the valid range for imshow with RGB data ([0..1] for floats or [0..255] for integers).



---

## 3 Ramin F. - @SimplyRamin