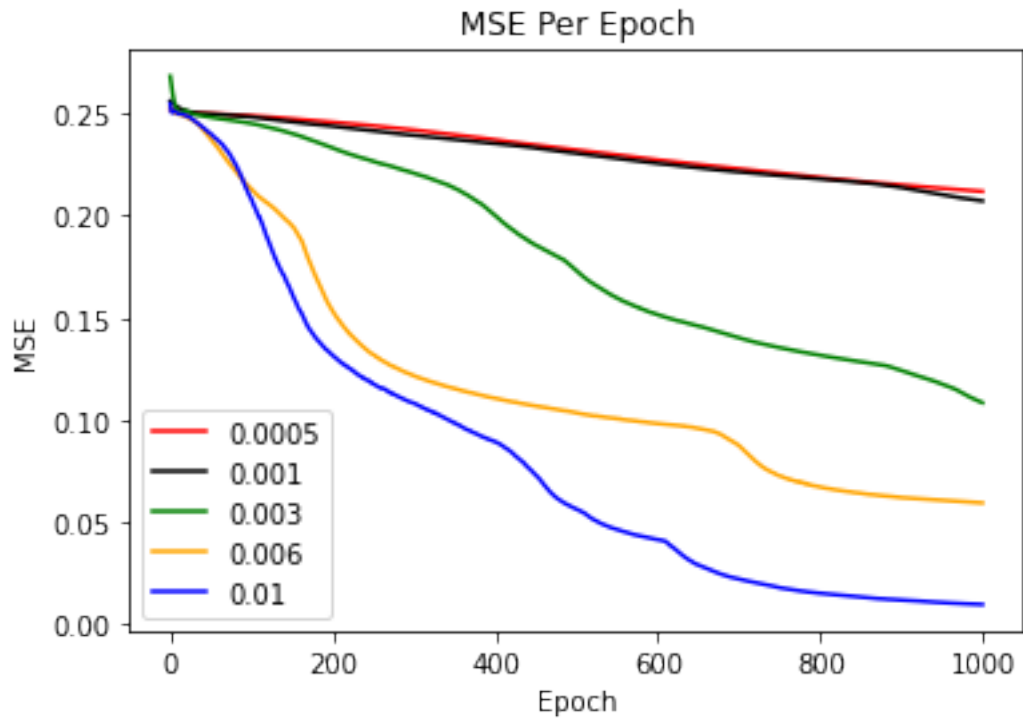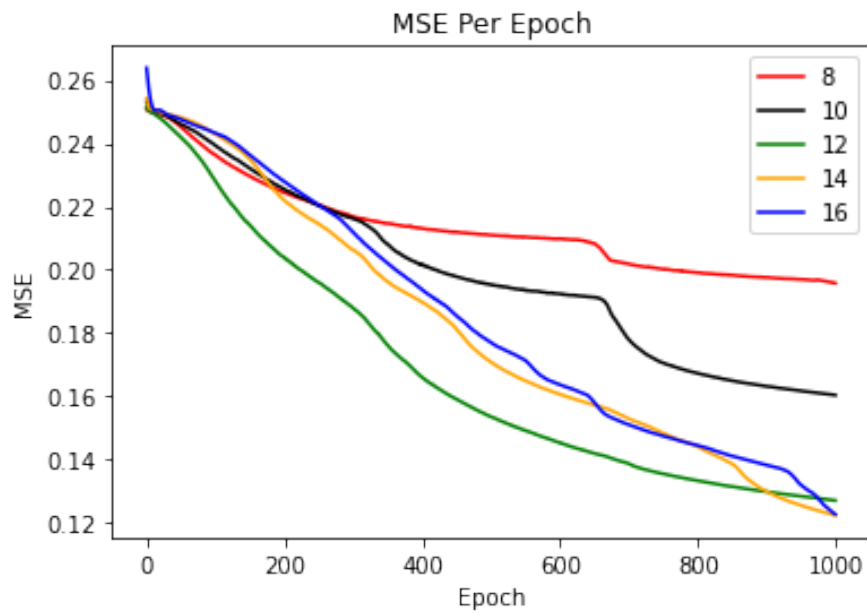Josh Cordova
Math 189Z
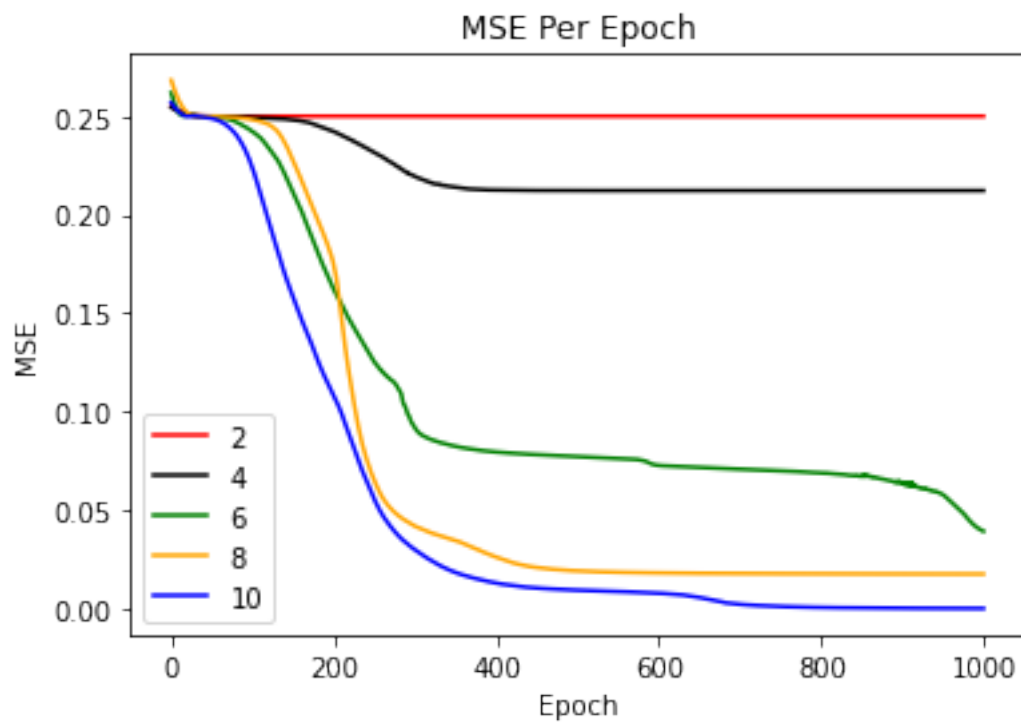Homework 4

Learning Rate Investigation

Layer Size Investigation:

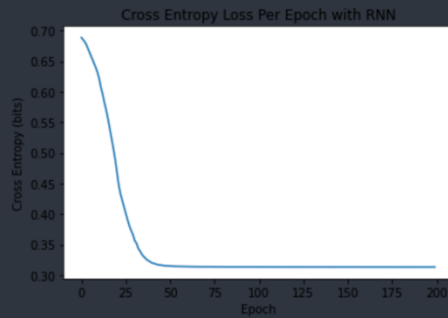Two Layer Investigation

MSE Per Epoch
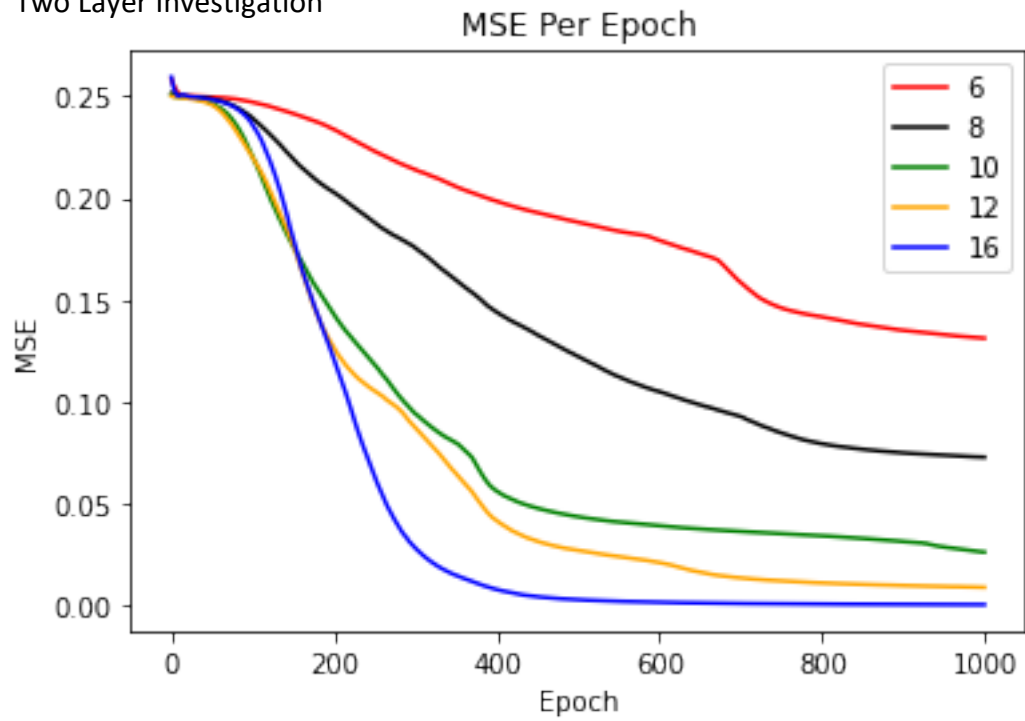
For Fun: 5 layer investigation

MSE Per Epoch

RNN Investigation:


```
In [215]:  # Now that we have trained the network, if all is good we should be able to classify
           # a sequence of many lengths using forward predict. Try it out below and see for yourself!

           #Should be [0,1]
           mynet.forward_predict(torch.FloatTensor([1,0,0,1,0,1,1,0,0,0,0,1]))


           tensor([[9.2387e-05, 9.9991e-01]], grad_fn=<SoftmaxBackward>)
```

```
In [214]:  # Should be [0,1]
           mynet.forward_predict(torch.FloatTensor([1]))

           tensor([[1.9892e-04, 9.9980e-01]], grad_fn=<SoftmaxBackward>)
```

```
In [213]:  # Should be [1,0]
           mynet.forward_predict(torch.FloatTensor([0,0,1,0,1,1,0,0,0,0,1]))

           tensor([[9.9967e-01, 3.3396e-04]], grad_fn=<SoftmaxBackward>)
```

```
In [216]:  # Should be [0,1]
           mynet.forward_predict(torch.FloatTensor([1,1,1,1,1,1,1]))

           tensor([[2.3210e-05, 9.9998e-01]], grad_fn=<SoftmaxBackward>)
```

```
In [217]:  # Should be [1,0]
           mynet.forward_predict(torch.FloatTensor([0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0

           tensor([[9.9991e-01, 8.7357e-05]], grad_fn=<SoftmaxBackward>)
```

```
In [ ]:
```