

HW2

```
With alpha: 0.25
Training data loss is: [[1.70673848e-05]]
Test data loss: [[2.35053685e-05]]
epoch count: 50

With alpha: 0.25
Training data loss is: [[2.07423363e-09]]
Test data loss: [[2.91512959e-09]]
epoch count: 75

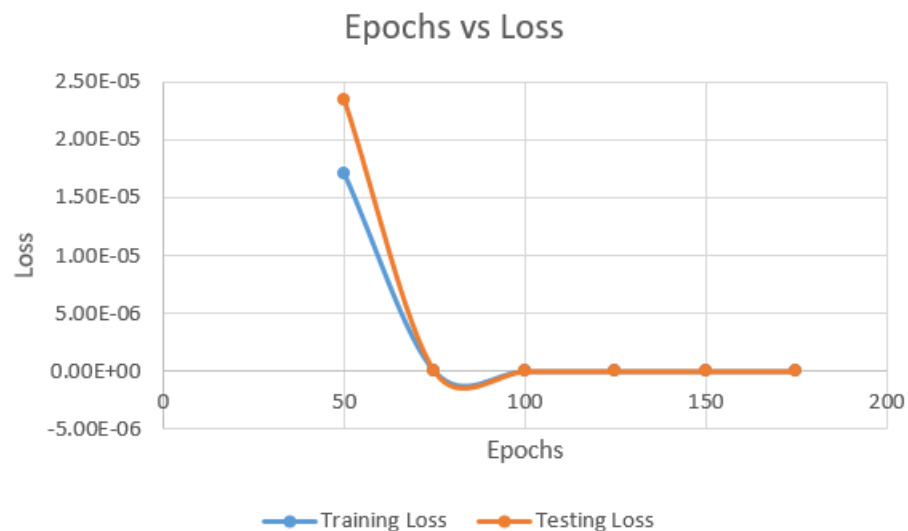
With alpha: 0.25
Training data loss is: [[2.54705212e-13]]
Test data loss: [[3.59625386e-13]]
epoch count: 100

With alpha: 0.25
Training data loss is: [[3.12945678e-17]]
Test data loss: [[4.42336361e-17]]
epoch count: 125

With alpha: 0.25
Training data loss is: [[3.84429115e-21]]
Test data loss: [[5.4352833e-21]]
epoch count: 150

With alpha: 0.25
Training data loss is: [[4.71309511e-25]]
Test data loss: [[6.688115e-25]]
epoch count: 175
```

- Keeping the Learning rate (alpha) constant at 0.25, the no. of epochs are increased from 50 till 175 in intervals of 25



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With alpha: 0.1
Training data loss is: [[0.0014202]]
Test data loss: [[0.0018851]]
epoch count: 100

With alpha: 0.2
Training data loss is: [[5.86394303e-10]]
Test data loss: [[8.24522311e-10]]
epoch count: 100

With alpha: 0.30000000000000004
Training data loss is: [[8.10421368e-17]]
Test data loss: [[1.145517e-16]]
epoch count: 100

With alpha: 0.4
Training data loss is: [[2.88247834e-24]]
Test data loss: [[4.0787881e-24]]
epoch count: 100

With alpha: 0.5
Training data loss is: [[2.94817042e-28]]
Test data loss: [[3.03127691e-28]]
epoch count: 100

With alpha: 0.6
Training data loss is: [[8.31459394e-29]]
Test data loss: [[1.08184385e-28]]
epoch count: 100

With alpha: 0.7000000000000001
Training data loss is: [[7.85863234e-29]]
Test data loss: [[6.44657132e-29]]
epoch count: 100

```

- Keeping the no. of epochs constant at 100, the learning rate (alpha) is increased from 0.1 till 0.7 in intervals of 0.1

