

## Homework #2

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### Part 2

I ran all combinations of the following alpha and epochs to test for a relationship between the two parameters. The loss values are of the training set and not of the test set, but the two do not differ significantly.

	epochs			
		100	500	1000
alpha	0.1	0.00142	7.10E-27	7.10E-27
	0.05	2.105222	3.11E-12	2.96E-26
	0.025	98.75743	7.00E-05	4.12E-12

As shown in the table, the resulting loss is minimized as alpha decreases and the number of epochs increases.

To achieve a testing loss smaller than  $1e-2$ , I used the following parameters:

**alpha = 0.05**

**epochs = 500**

Which resulted in the **test loss = 9.52E-27**.