**Make a code for plotting some graphs that help your analysis.**

1. Loss graph

2. The real function and the learned function

**Analyze about convergence according to learning rate. (Including loss graph per epoch, and the real function and the learned function per 100 epoch)**

Fix other conditions as follow:

* Loss function: SmoothL1
* Optimizer: SGD
* Number of epochs = 500
* Dataset size = 200
* Batch size = 50

Control learning rate:

* 0.1 / 0.01 / 0.001

**Analyze about convergence according to batch size. (Including loss graph per epoch, and the real function and the learned function per 100 epochs)**

Fix other conditions as follow:

* Loss function: SmoothL1
* Optimizer: SGD
* Number of epochs = 500
* Data size = 200
* Learning rate = 0.01

Control batch size:

* 1 / 50 / 200

**In addition, I want for you to understand the code flow exactly and to explore various situations through this HW. For example, analysis about loss function, dataset size, and no-fixed initialization, and so on.**