Group 6
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Task 3 (One paragraph with a qualitative description of the filters' outputs):
The higher the K value, the more blurred and convoluted the image appears to be. A higher K indicates a higher total number of filter coefficients of the two dimensional convolution $(2K+1)^2$ and a greater number of nearby pixels we are looking at. Higher coefficients will also amplify the changes induced in the pixel values of the image, making edges appear more pronounced.

Task 6:
Number of images in the train and test set → 60,000 in train set, 10,000 in test set
Training Loss →

```
Epoch: 0        Loss: 14.915    Acc: 30.45
Epoch: 1        Loss: 3.083     Acc: 40.38
Epoch: 2        Loss: 2.148     Acc: 44.95
Epoch: 3        Loss: 1.845     Acc: 46.97
Epoch: 4        Loss: 1.670     Acc: 48.65
Epoch: 5        Loss: 1.572     Acc: 49.59
Epoch: 6        Loss: 1.500     Acc: 50.37
Epoch: 7        Loss: 1.450     Acc: 51.01
Epoch: 8        Loss: 1.408     Acc: 51.61
Epoch: 9        Loss: 1.374     Acc: 52.29
```

Testing Loss → Loss: 1.486, Accuracy: 50%