

```
from keras.datasets import mnist
from matplotlib import pyplot
# loading
(train_X, train_y), (test_X, test_y) = mnist.load_data()
# shape of dataset
print('X_train: ' + str(train_X.shape))
print('Y_train: ' + str(train_y.shape))
print('X_test: ' + str(test_X.shape))
print('Y_test: ' + str(test_y.shape))
# plotting
from matplotlib import pyplot
for i in range(5):
    pyplot.subplot(330 + 1 + i)
    pyplot.imshow(train_X[i], cmap=pyplot.get_cmap('gray'))
pyplot.show()
```

Explanation:

`pyplot.subplot(330 + 1 + i)`: This command creates a grid of subplots within a figure.

- 330 indicates a 3x3 grid of subplots.
- + 1 + i determines the position of the current subplot within that grid. The loop iterates from $i = 0$ to 4, so this will select positions 1 through 5 in the 3x3 grid.

`pyplot.imshow(train_X[i], cmap=pyplot.get_cmap('gray'))`: This displays the image at index i from the `train_X` dataset.

- `train_X[i]` selects the i -th image from the training data.
- `cmap=pyplot.get_cmap('gray')` sets the colormap to grayscale, which is appropriate for these black and white handwritten digit images.

`pyplot.show()`: This command renders the plot, displaying the image in the selected subplot.