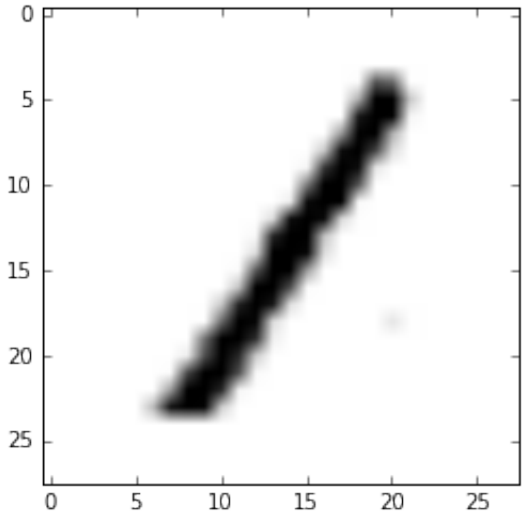
In [1]:
```
%pylab inline
import pylab
from sklearn.datasets import fetch_mldata
DATA_PATH = '~/data'
mnist = fetch_mldata('MNIST original', data_home=DATA_PATH)
```

```
Populating the interactive namespace from numpy and matplotlib
```

In [2]:
```
### The data in the data sets are arranged in acsending order of digit
s starting from 0
### and upto 9 in data sets which we are using to train the models i.e
from 1 to 60000. Thereafter
### the dataset again contains digits from 0 to 9 in ascending order a
nd this portion of dataset is
### used for cross-validation/testing the efficiency of the model.
img1 = mnist.data[10000]
img2 = mnist.data[15000]
img3 = mnist.data[20002]
img4 = mnist.data[30003]
img5 = mnist.data[35003]
img6 = mnist.data[39004]
img7 = mnist.data[45004]
img8 = mnist.data[49005]
img9 = mnist.data[55005]
img11 = mnist.data[62005]
img12 = mnist.data[63005]
img13 = mnist.data[64005]
img14 = mnist.data[65005]
img15 = mnist.data[66005]
img16 = mnist.data[66505]
img17 = mnist.data[67005]
img18 = mnist.data[68505]
img19 = mnist.data[69005]
```

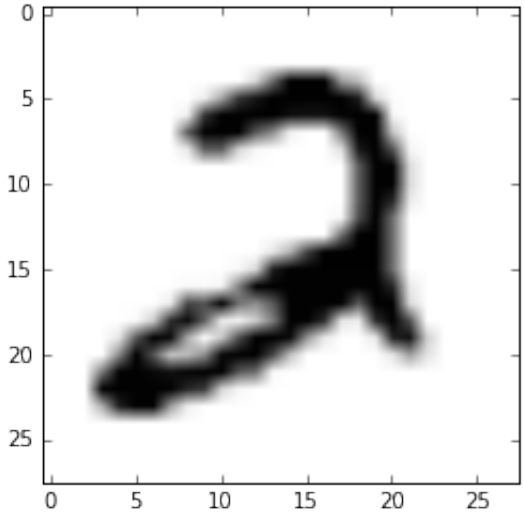
In [3]:
```
pylab.imshow(img1.reshape(28, 28), cmap="Greys")
```

Out[3]:
```
<matplotlib.image.AxesImage at 0x10be5ef98>
```



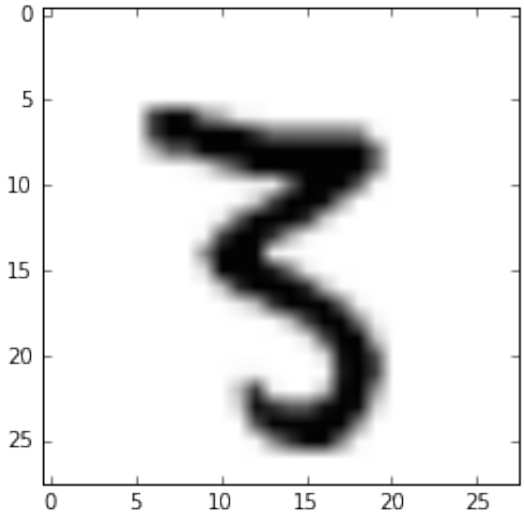
In [4]:
```
pylab.imshow(img2.reshape(28, 28), cmap="Greys")
```

Out[4]:
```
<matplotlib.image.AxesImage at 0x1125a9e48>
```



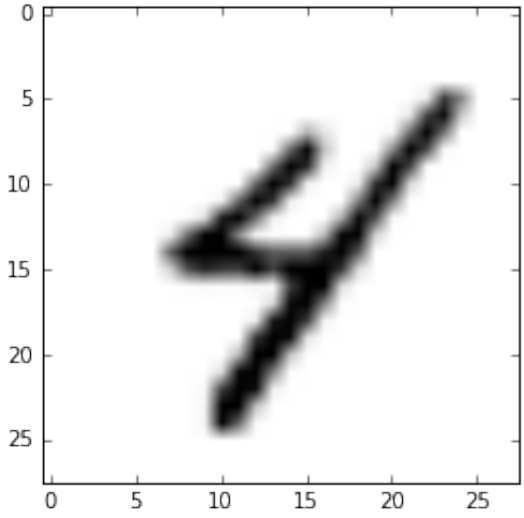
In [5]:
```
pylab.imshow(img3.reshape(28, 28), cmap="Greys")
```

Out[5]: <matplotlib.image.AxesImage at 0x11268b710>



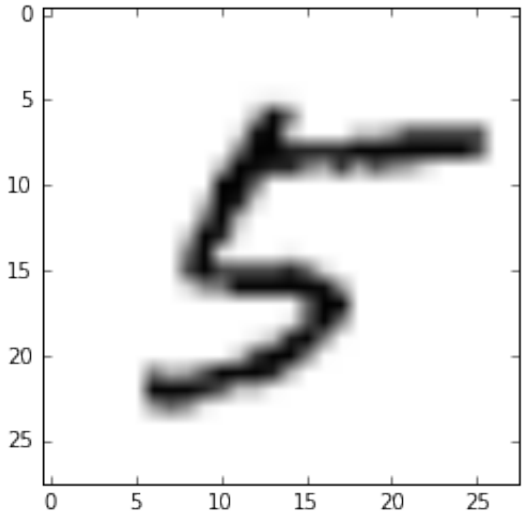
In [6]:
```
pylab.imshow(img4.reshape(28, 28), cmap="Greys")
```

Out[6]: <matplotlib.image.AxesImage at 0x112885c88>



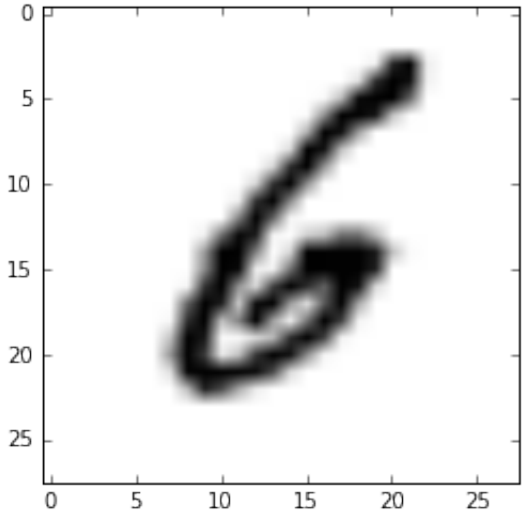
In [7]:
```
pylab.imshow(img5.reshape(28, 28), cmap="Greys")
```

Out[7]: <matplotlib.image.AxesImage at 0x11295f7b8>



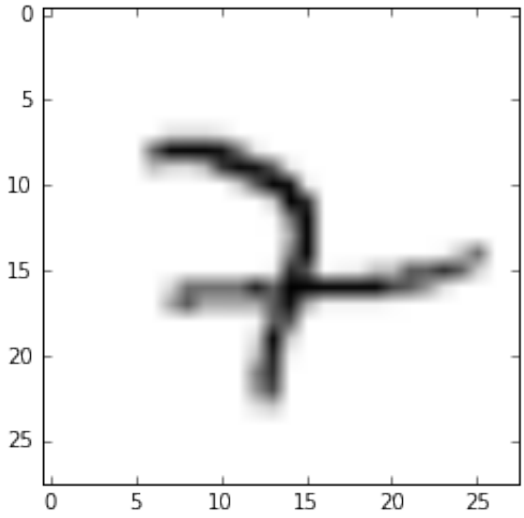
In [8]:
```
pylab.imshow(img6.reshape(28, 28), cmap="Greys")
```

Out[8]: <matplotlib.image.AxesImage at 0x112a3bcc0>



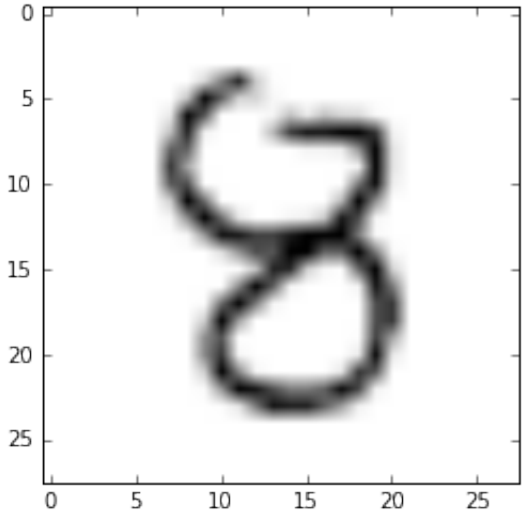
In [9]:
```
pylab.imshow(img7.reshape(28, 28), cmap="Greys")
```

Out[9]: <matplotlib.image.AxesImage at 0x112b56940>



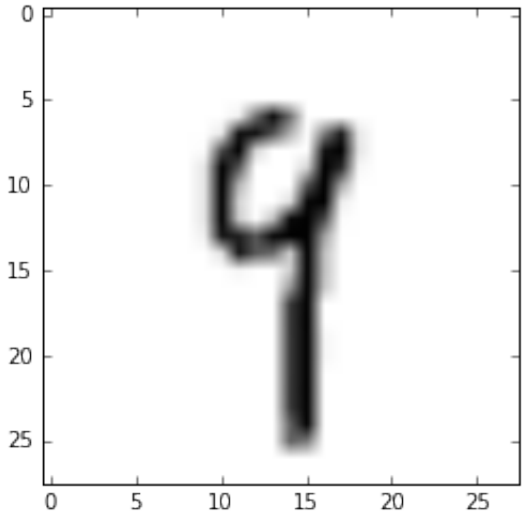
In [10]:
```
pylab.imshow(img8.reshape(28, 28), cmap="Greys")
```

Out[10]: <matplotlib.image.AxesImage at 0x112c703c8>



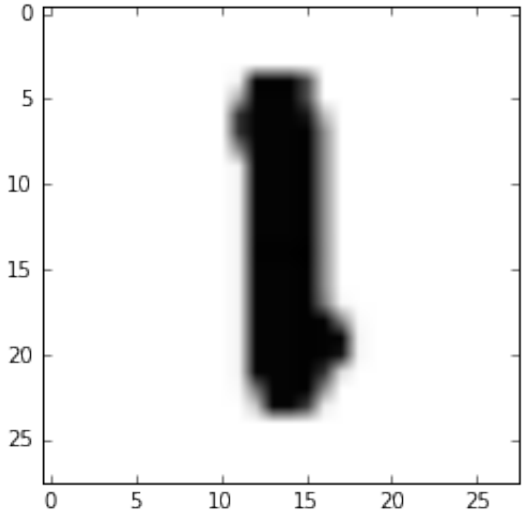
In [11]:
```
pylab.imshow(img9.reshape(28, 28), cmap="Greys")
```

Out[11]:
```
<matplotlib.image.AxesImage at 0x112f28198>
```



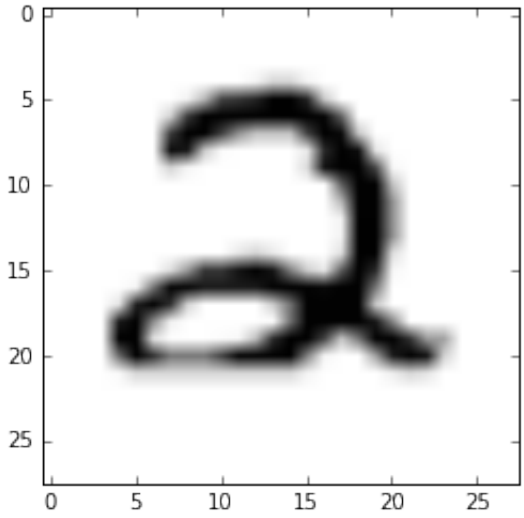
In [12]:
```
pylab.imshow(img11.reshape(28, 28), cmap="Greys")
```

Out[12]:
```
<matplotlib.image.AxesImage at 0x112fc49e8>
```



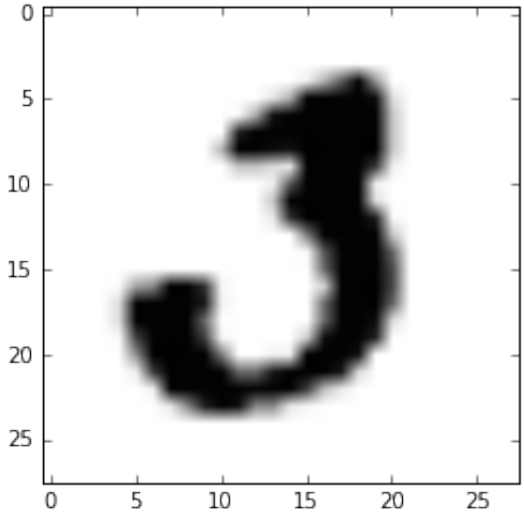
In [13]:
```
pylab.imshow(img12.reshape(28, 28), cmap="Greys")
```

Out[13]: <matplotlib.image.AxesImage at 0x113159470>



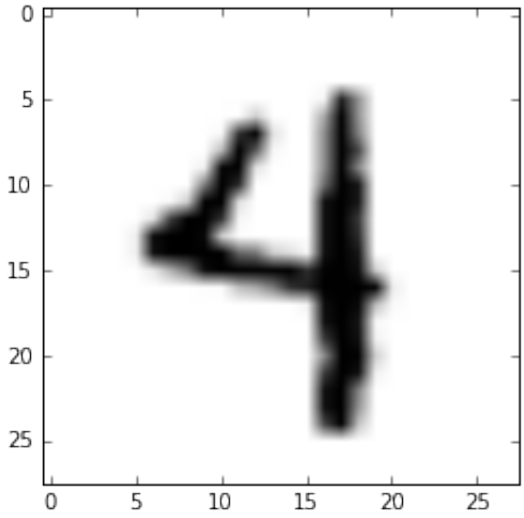
In [14]:
```
pylab.imshow(img13.reshape(28, 28), cmap="Greys")
```

Out[14]: <matplotlib.image.AxesImage at 0x1131f3eb8>



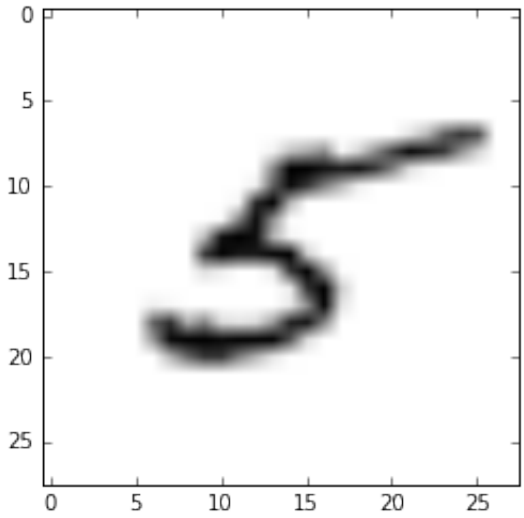
In [15]:
```
pylab.imshow(img14.reshape(28, 28), cmap="Greys")
```

Out[15]: <matplotlib.image.AxesImage at 0x11330d940>



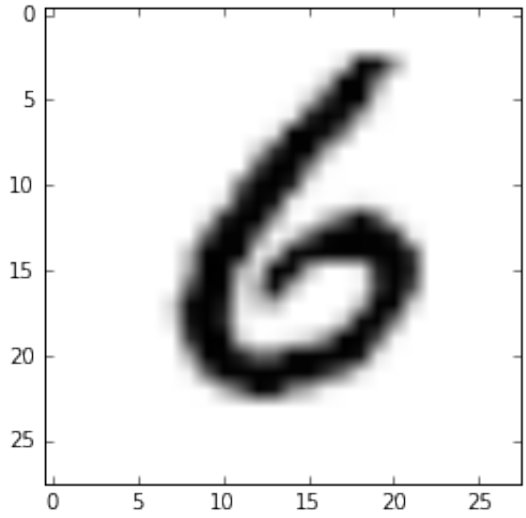
In [16]:
```
pylab.imshow(img15.reshape(28, 28), cmap="Greys")
```

Out[16]: <matplotlib.image.AxesImage at 0x11355fdd8>



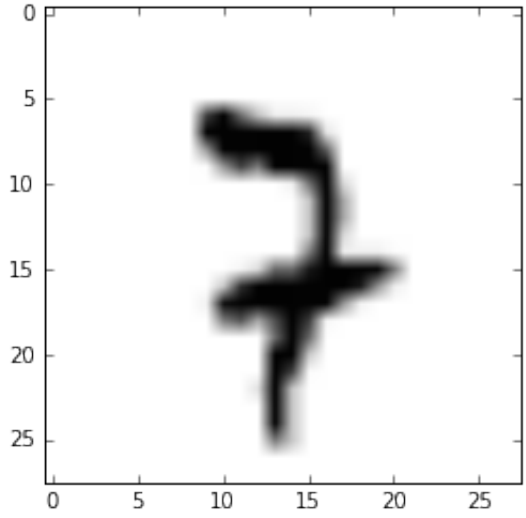
In [17]:
```
pylab.imshow(img16.reshape(28, 28), cmap="Greys")
```

Out[17]: <matplotlib.image.AxesImage at 0x113674f60>



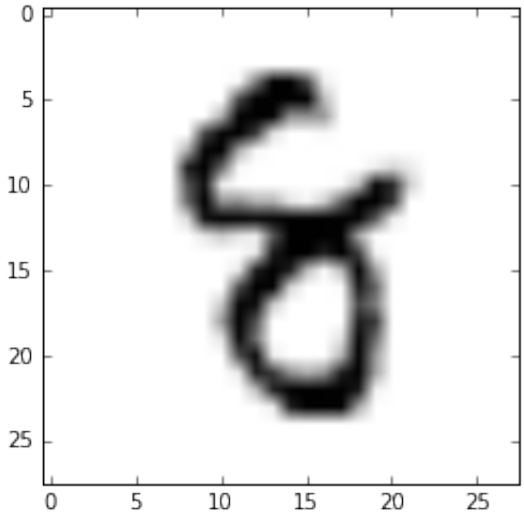
In [18]:
```
pylab.imshow(img17.reshape(28, 28), cmap="Greys")
```

Out[18]: <matplotlib.image.AxesImage at 0x11378e748>



In [19]:
```
pylab.imshow(img18.reshape(28, 28), cmap="Greys")
```

Out[19]: <matplotlib.image.AxesImage at 0x1138a5518>



In [20]:
```
pylab.imshow(img19.reshape(28, 28), cmap="Greys")
```

Out[20]: <matplotlib.image.AxesImage at 0x113b2aa20>