Convergence

March 24, 2016

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In [6]: import numpy as np
        import pandas as pd
        import matplotlib.pyplot as plt
        import seaborn as sns
        %matplotlib inline

In [13]: evP1 = pd.read_table("fleche/eigenvaluesP1.txt",
                      dtype={'names': ['points', 'l1', 'l2', 'l3', 'l4', 'l5', 'l6', 'l7', 'l8'
                                       'formats': ['i', 'f', 'f', 'f', 'f', 'f', 'f', 'f
                      names = ['points', 'l1', 'l2', 'l3', 'l4', 'l5', 'l6', 'l7', 'l8', 'l9',
                      delim_whitespace=True, header=0)
         evP2 = pd.read_table("fleche/eigenvaluesP2.txt",
                      dtype={'names': ['points', 'l1', 'l2', 'l3', 'l4', 'l5', 'l6', 'l7', 'l8'
                                       'formats': ['i', 'f', 'f', 'f', 'f', 'f', 'f', 'f
                      names = ['points', 'l1', 'l2', 'l3', 'l4', 'l5', 'l6', 'l7', 'l8', 'l9',
                      delim_whitespace=True, header=0)
         evP3 = pd.read_table("fleche/eigenvaluesP3.txt",
                      dtype={'names': ['points', 'l1', 'l2', 'l3', 'l4', 'l5', 'l6', 'l7', 'l8'
                                       'formats': ['i', 'f', 'f', 'f', 'f', 'f', 'f', 'f
                      names = ['points', 'l1', 'l2', 'l3', 'l4', 'l5', 'l6', 'l7', 'l8', 'l9',
                      delim_whitespace=True, header=0)

In [14]: evP3
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Out[14]:      points       l1        l2        l3        l4        l5        l6        l7  \
         0        10   10.1578   14.6284   20.7143   26.1529   29.0035   36.8424   42.3955
         1        15   10.1551   14.6254   20.7089   26.1516   28.9985   36.8402   42.3919
         2        20   10.1541   14.6244   20.7068   26.1512   28.9966   36.8392   42.3907
         3        25   10.1536   14.6238   20.7058   26.1510   28.9956   36.8387   42.3900
         4        30   10.1531   14.6233   20.7048   26.1508   28.9948   36.8383   42.3894
         5        35   10.1529   14.6231   20.7043   26.1506   28.9943   36.8381   42.3891
         6        40   10.1529   14.6230   20.7043   26.1506   28.9943   36.8381   42.3891
         7        45   10.1526   14.6229   20.7039   26.1506   28.9939   36.8379   42.3889
         8        50   10.1525   14.6228   20.7037   26.1505   28.9936   36.8378   42.3888
         9        55   10.1524   14.6227   20.7035   26.1505   28.9935   36.8377   42.3887
         10       60   10.1523   14.6226   20.7033   26.1505   28.9933   36.8376   42.3886
         11       65   10.1523   14.6225   20.7032   26.1504   28.9932   36.8376   42.3885
         12       70   10.1522   14.6225   20.7031   26.1504   28.9931   36.8376   42.3884
         13       75   10.1522   14.6224   20.7031   26.1504   28.9931   36.8376   42.3884
         14       80   10.1522   14.6224   20.7030   26.1504   28.9930   36.8375   42.3884
         15       85   10.1521   14.6224   20.7029   26.1504   28.9929   36.8375   42.3883
         16       90   10.1521   14.6224   20.7029   26.1504   28.9929   36.8375   42.3883
         17       95   10.1521   14.6223   20.7028   26.1503   28.9929   36.8374   42.3883
         18      100   10.1520   14.6223   20.7027   26.1503   28.9928   36.8374   42.3882
```
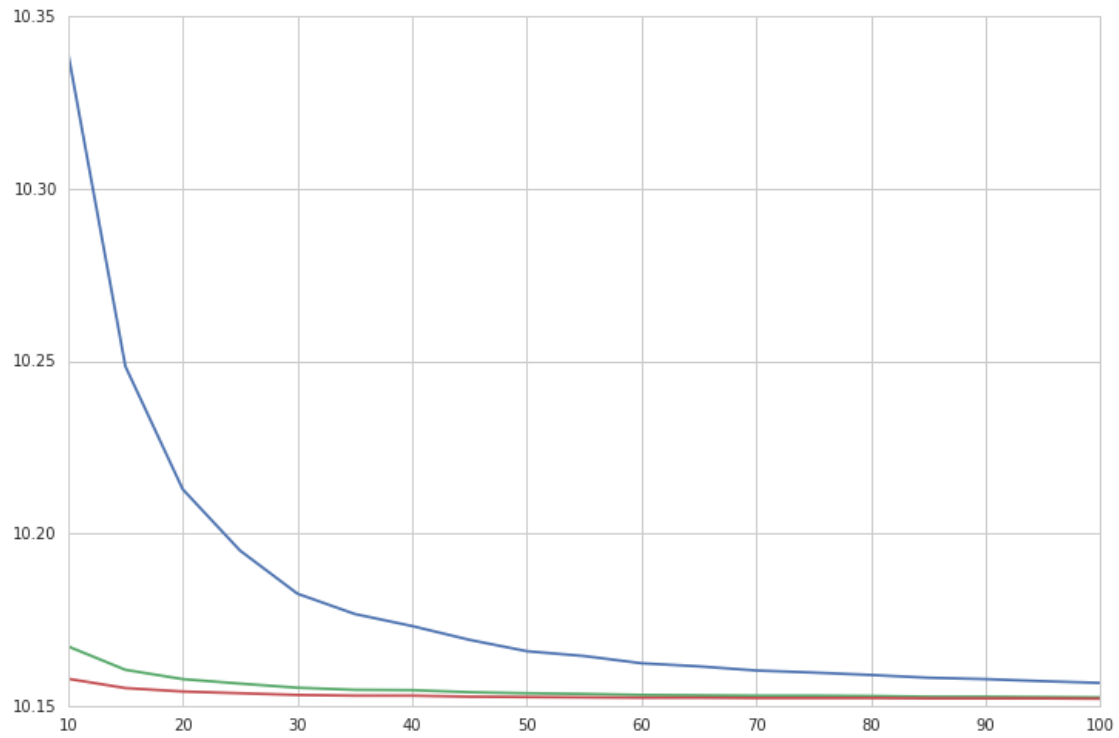
```
         l8        l9       l10       l11       l12
0    46.1679   49.3482   52.2322   57.2616   63.5131
1    46.1668   49.3481   52.2246   57.2588   63.4999
2    46.1664   49.3480   52.2214   57.2577   63.4955
3    46.1662   49.3480   52.2199   57.2572   63.4931
4    46.1660   49.3480   52.2186   57.2568   63.4908
5    46.1659   49.3480   52.2179   57.2565   63.4896
6    46.1659   49.3480   52.2179   57.2565   63.4895
7    46.1658   49.3480   52.2171   57.2563   63.4888
8    46.1658   49.3480   52.2167   57.2561   63.4885
9    46.1658   49.3480   52.2165   57.2561   63.4879
10   46.1658   49.3480   52.2161   57.2560   63.4876
11   46.1657   49.3480   52.2161   57.2559   63.4872
12   46.1657   49.3480   52.2159   57.2559   63.4870
13   46.1657   49.3480   52.2159   57.2559   63.4869
14   46.1657   49.3480   52.2158   57.2558   63.4869
15   46.1657   49.3480   52.2156   57.2558   63.4866
16   46.1657   49.3480   52.2156   57.2558   63.4866
17   46.1657   49.3480   52.2155   57.2557   63.4864
18   46.1657   49.3480   52.2154   57.2557   63.4863
```

```python
In [15]: plt.figure(figsize=(12,8*3),dpi=80)
         for i in range(1,13):
             plt.subplot(6,2,i)
             plt.plot(evP1.points,evP1['l'+str(i)],evP2.points,evP2['l'+str(i)],evP3.points,evP3['l'+st
```

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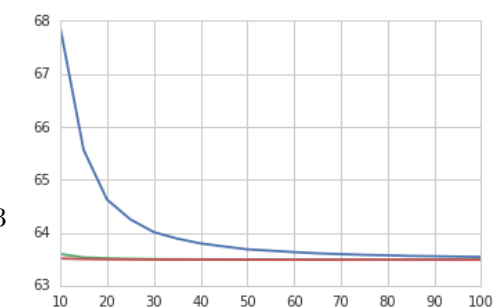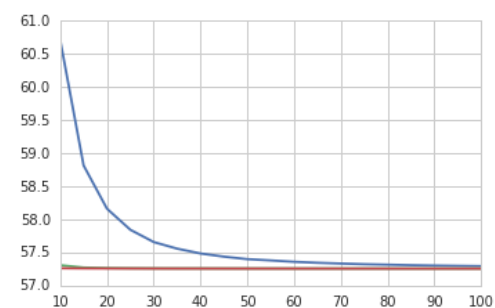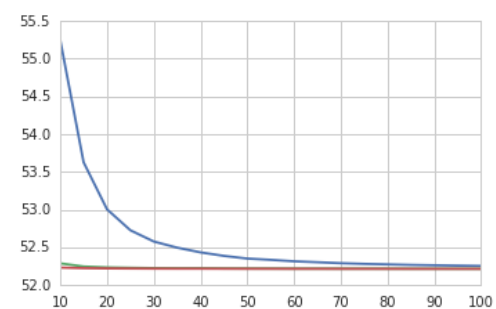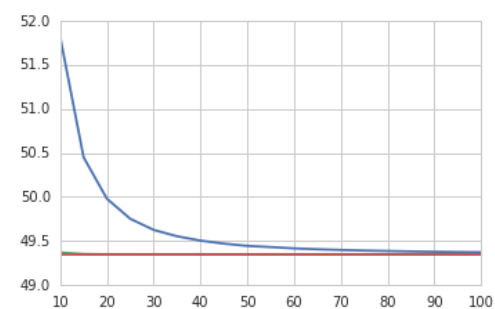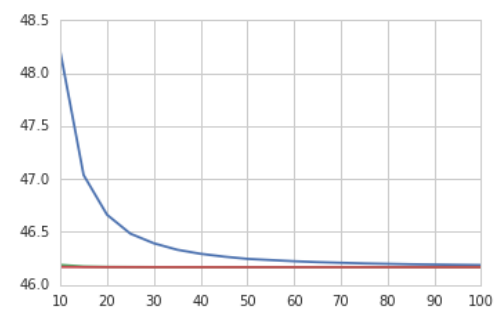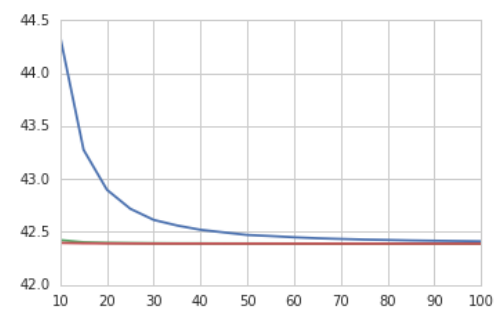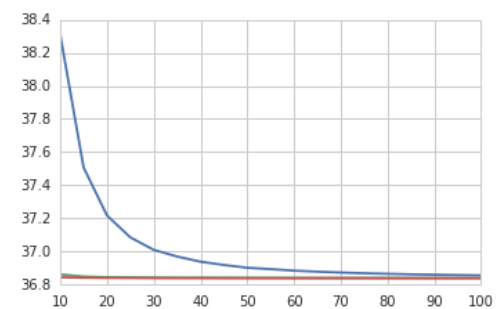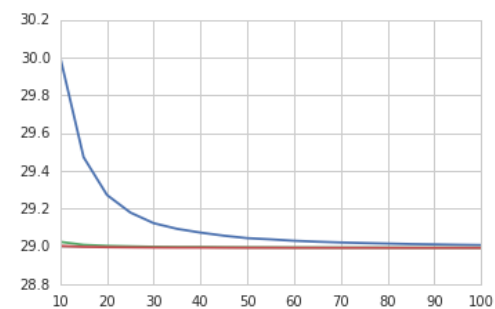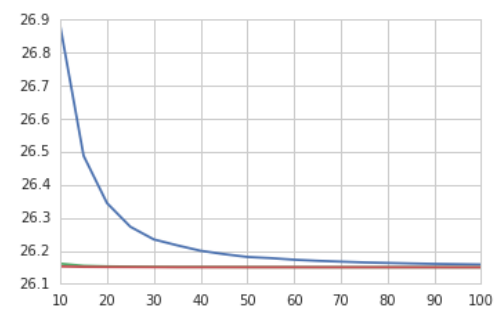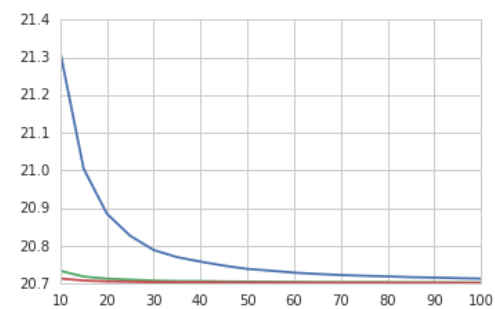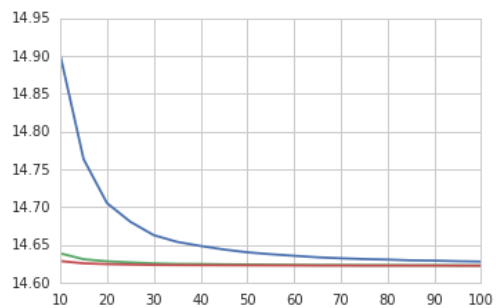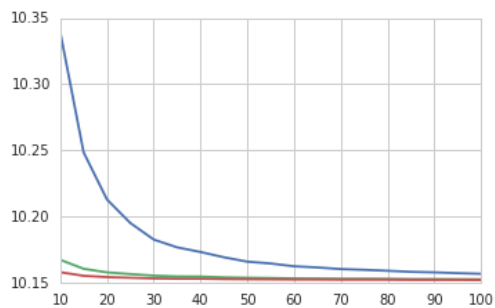
```
In [16]: plt.figure(figsize=(12,8),dpi=80)
         sns.set_style("whitegrid")
         plt.plot(evP1.points,evP1['l1'],evP2.points,evP2['l1'],evP3.points,evP3['l1'])
```

```
Out[16]: [<matplotlib.lines.Line2D at 0x7f1bff4d96d8>,
          <matplotlib.lines.Line2D at 0x7f1bff4d9898>,
          <matplotlib.lines.Line2D at 0x7f1bff4d7208>]
```



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In [ ]:
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