Name: _____ Date: _____ Block: _____

Measures of Central Tendency Worksheet

1) The heights (in inches) of eight tomato plants are:

      36, 45, 52, 40, 38, 41, 50, and 48

   Find the range, mean, median, and mode(s) of the tomato plant heights.

2) You and your friend have a friendly competition going on about the scores on your math quizzes.   Both of your scores for the first five quizzes are given below.

      Your quiz scores: 18, 16, 19, 15, 17
      Friend's quiz scores: 20, 20, 13, 12, 17

   a) Find the mean, median, and mode of both sets of data.

   b) Do you or your friend have the higher mean? Who has the highest median?

3) In which dataset is the median value equal to the mean value?

   a) {2, 4, 6, 7, 8}   b) {12, 18, 20, 23, 24} c) {16, 17, 18, 19, 20}   d) {50, 60, 65, 75, 85}

4) Below are percentages of all doctorates earned by men and women between 1980 and 1989.

| College	Women	Men
Boudoin	45	48
Carleton	38	61
Grinnell	34	47
Middlebury	36	46
Oberlin	20	34
Swarthmore	34	46

   a) What is the difference between the means of the percentages of doctorates earned by women and men?

   b) What is the difference in the ranges of the percentages of doctorates earned by men and women?

   c) How much higher is the median of the percentage of doctorates earned by men than the median of the percentage earned by women?

5) Suppose the students in a class received the following test scores:

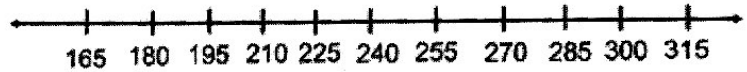85, 90, 65, 75, 90, 95, 80, 80, 70, 85, 85, 100, 60, 75, 80, 85, 90

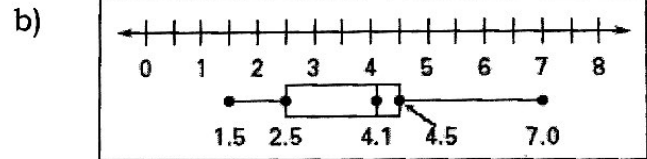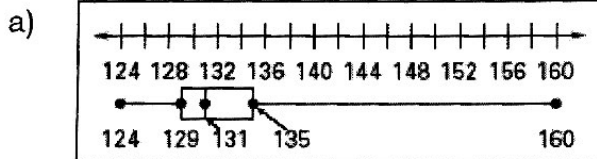Create a box-and-whiskers plot for this data.

```
├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤
   55  60  65  70  75  80  85   90  95 100 105
```
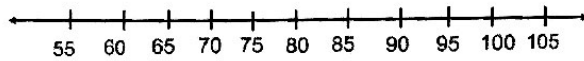
6) A research scientist recorded the following readings for an experiment she was working on.

173, 206, 179, 257, 198, 251, 239, 246, 295, 181, 261

Create a box-and-whiskers plot for the data.

```
├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤
165  180  195  210 225 240 255  270 285 300 315
```

7) Identify the requested values by analyzing the box-and-whisker plots below.

a)
```
├┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┤
124 128 132 136 140 144 148 152 156 160
124  129 131  135                    160
```

b)
```
├┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┤
  0   1   2   3   4   5   6   7   8
    1.5  2.5    4.1  4.5      7.0
```

Median_____

Upper quartile _____

Lower quartile _____

Lower Extreme ____ Upper Extreme ___

Range _____Interquartile range _____

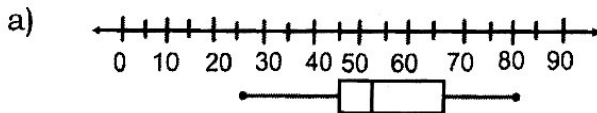Median_____

Upper quartile _____

Lower quartile _____

Lower Extreme _____ Upper Extreme ____

Range _____ Interquartile range _____

8) Which box-and-whiskers plot has the greatest interquartile range?

a)
```
├┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┤
0  10  20  30  40 50  60   70  80  90
```

b)
```
├┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┤
0  10  20  30  40 50  60   70  80  90
```

c)
```
├┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┤
0  10  20  30  40 50  60   70  80  90
```

d)
```
├┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┤
0  10  20  30  40 50  60   70  80  90
```
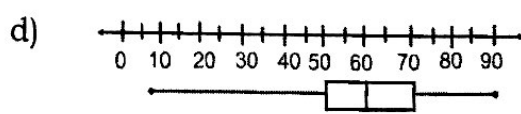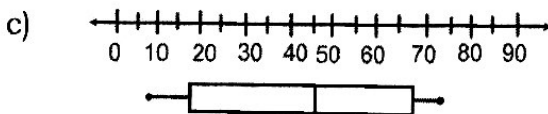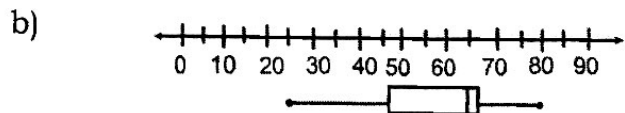
9) Using the data plotted on the scatter plot, which is the best prediction for income in the year 2000?

a) 35,000

b) 43,000

c) 50,000

d) 57,000

Annual Income