

Homework #9.1: Intro to Statistics

Date: _____

1. Go to your bedroom and describe what you see by using quantitative and qualitative data. Use at least three of each.

2. Calculate the mean, median, mode, and range of the following data sets:

a) Shoe Size $n = 16$

4	6.5	7.5	8	7	10	6.5
8	9	7	8	10	10	11
7.5	10					

$$\text{Mean} = \frac{128}{16} = 8$$

Median: 4, 6, 6.5, 6.5, 7, 7, 7.5, 7.5, 8, 8, 9, 9, 9, 10, 10, 11

$$\frac{n+1}{2} = \frac{16+1}{2} = \frac{17}{2} = 8.5^{\text{th}} \rightarrow \frac{7.5+8}{2} = 7.75$$

mode: 10 Range: $11 - 4 = 7$

b) Minutes to Run 5km $n = 17$

27.2	25.8	38.3	41.2	41.5
33.6	26	33.2	33.5	41.2
25.2	29	31.5	32.2	33.1
25	25.5			

$$\text{Mean} = \frac{482.8}{17} = 28.4 \text{ minutes}$$

Median: 25, 25.2, 25.3, 25.8, 26, 27.2, 29, 31.5, 32.2, 33.1, 33.2, 33.5, 33.6, 38.3, 41.2, 41.2, 41.5

$$\frac{17+1}{2} = \frac{18}{2} = 9^{\text{th}}$$

Median = 32.2 minutes

Mode = 41.2 minutes

Range = $41.5 - 25 = 16.5$ minutes

3. Research: Look up the following types of graphs. Draw a sketch and explain what they are useful for.

a) Pie graph

b) Bar graph

c) Scatter Plot

d) Line graph

e) Histogram