

Bellwork: Find the sum of the series below

$$2+6+18+\dots+118098, n=11$$

$$S = \frac{a(1-r^n)}{1-r} = \frac{2(1-3^{11})}{(1-3)}$$
$$= \boxed{177,146}$$

$$a = 2$$

$$r = 3$$

$$n = 11$$

Homework 9.2 Solutions

$$13) \quad \begin{array}{l} \text{A} \\ a_1 = 33000 \\ r = 1.07 \\ n = 5 \end{array}$$

$$\begin{array}{l} \text{B} \\ a_1 = 35000 \\ r = 1.04 \\ n = 5 \end{array}$$

$$S = \frac{33000(1-1.07^5)}{(1-1.07)}$$

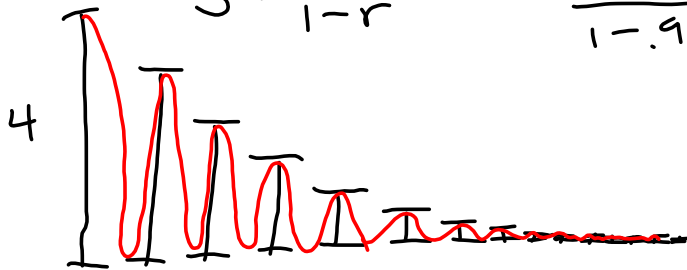
$$\boxed{\$189,774}$$

$$\frac{35000(1-1.04^5)}{(1-1.04)}$$

$$\$189,571$$

$$S = \frac{a}{1-r}$$

$$\frac{4}{1-.98} = 200$$



$$400 - 4 = \boxed{396 \text{ ft}}$$

Lesson 9.3 Objectives:

I can identify the central tendency, standard deviation, range, and quartiles from data

\bar{x} Mean: the calculated "central" value of a set of numbers - the average

$$m = \frac{x_1 + x_2 + x_3 + \dots + x_n}{n}$$

Med Median: the "middle" term of a set of values

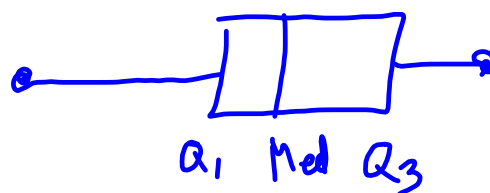
Mode: the term repeating most often in a set of values

S_x Standard deviation: measures the "spread" of the data

Range: The difference between the highest and lowest values in a set of data

Quartile: The values that divide a list of numbers into quarters. (similar to median) 1, 2, 3, 4, 5, 10
 Q_1 , Med Q_3

Interquartile Range: The difference between the first and third quartiles $Q_3 - Q_1$



1. 8, 10, 9, 15, 20, 18, 10, 15, 18, 15, 15, 16, 12, 19, 11, 13, 15, 10

$$\bar{x} = 13.8\bar{3} \quad R = 20 - 8 = 12$$

$$S_x = 3.63$$

$$\text{Med} = 15 \quad \text{IQR} = 16 - 10 = 6$$

$$Q_1 = 10 \quad \text{Mode} = 15$$

$$Q_3 = 16$$

2. 12, 80, 65, 30, 76, 12, 50, 55, 56, 57, 45, 35, 12, 15, 20, 25, 27, 28

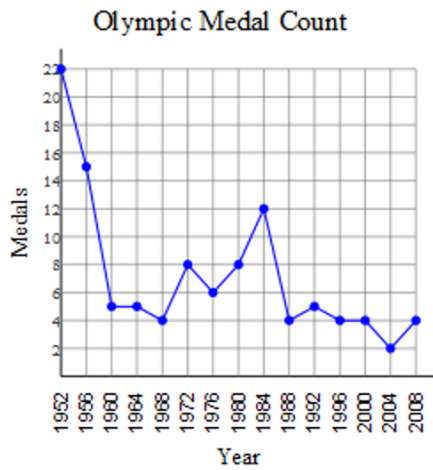
66, 64, 67, 63, 62, 62, 73,
69, 63, 65, 63, 68, 62, 67.5,
61, 74, 70, 71, 68

$$\bar{x} = 66.24 \quad S_x = 3.93$$

$$\text{med} = 66 \quad Q_1 = 63$$

$$\text{mode} = 62, 63 \quad Q_3 = 69$$

$$\text{Range} = 13 \quad \text{IQR} = 6$$



22, 15, 5, 5, 4, 8, 6, 8,
12, 4, 5, 4, 4, 2, 4

Mode = 4

4.

Length of Book Titles	
# Words	Frequency
1	1
2	7
3	2
4	3
5	2

1, 2, 2, 2, 2, 2, 2, 2,
3, 3, 4, 4, 4, 5, 5

Mode = 2

