AGS 1 Name: _____ Period: _____ Date: _____

Notes 4.7 – Average Point

Warmup

1. Find the average high temperature for the first 10 days in March in Beaverton.

46, 49, 51, 49, 51, 57, 52, 56, 54, 62

$527 \div 10 = 52.7°$

2. Find the average high temperature for the first 10 days in March in Kihei, Hawaii.

79, 79, 83, 82, 80, 77, 79, 76, 76, 76

$787 \div 10 = 78.7°$

3. Write an equation that goes through the given points: (3.4, 7) and (1.6, 5.2)

$m = \frac{5.2-7}{1.6-3.4} = \frac{-1.8}{-1.8} = 1$

$y = 1(x-1.6)+5.2$

$y = 1(x-3.4)+7$

$y = 1x - 3.4 + 7$

$y = x + 3.6$

Lesson

Word	Meaning/Notation	Example
Average Point $(\bar{x}, \bar{y})$	The average of the x values and the average of the y values that give the average of the data set	x: 0, 1, 2 → $3 \div 3 = 1$ y: 3, 4, 7 → $14 \div 3 = 4\frac{2}{3}$ $(\bar{x}, \bar{y})$: $(1, 4\frac{2}{3})$

Slope: $m = \frac{y_2-y_1}{x_2-x_1}$ Point Slope Form: $y = m(x-x_1)+y_1$

Slope Intercept Form: $y = mx + b$

For each set:

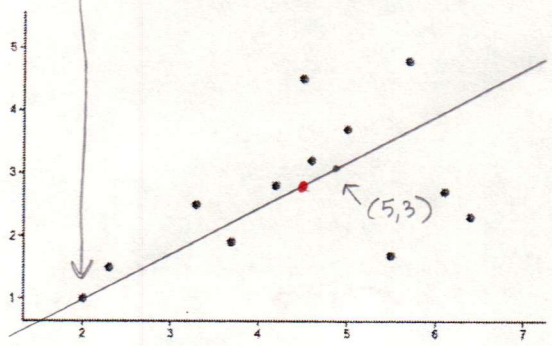
a. Calculate the average point $(\bar{x}, \bar{y})$
b. Plot the point in a different color
c. Draw the line of best fit through the new point
d. Find the equation for the line of best fit.

Set A

x	2	2.3	3.3	3.7	4.2	4.6	4.5	5	5.5	5.7	6.1	6.4
y	1	1.5	2.5	1.9	2.8	3.2	4.5	3.7	1.7	4.8	2.7	2.3

$53.3 \div 12 = 4.4$

$32.6 \div 12 = 2.7$



$(\bar{x}, \bar{y})$: $(4.4, 2.7)$ $(2, 1)$

Equation:

$$m = \frac{2.7 - 1}{4.4 - 2} = \frac{1.7}{2.4} = .71$$

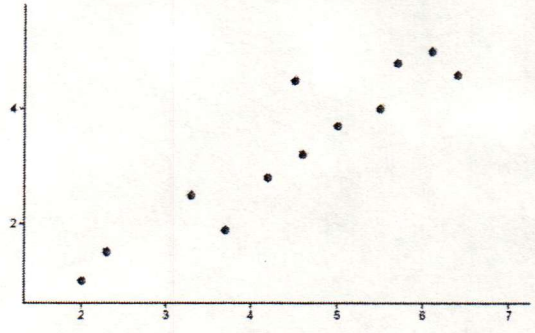
$$y = .71(x - 4.4) + 2.7$$

$$y = .71x - 3.124 + 2.7$$

$$y = .71x - .424$$

Set B

x	2	2.3	3.3	3.7	4.2	4.6	4.5	5	5.5	5.7	6.1	6.4
y	1	1.5	2.5	1.9	2.8	3.2	4.5	3.7	4	4.8	5	4.6



$(\bar{x}, \bar{y})$:

Equation: