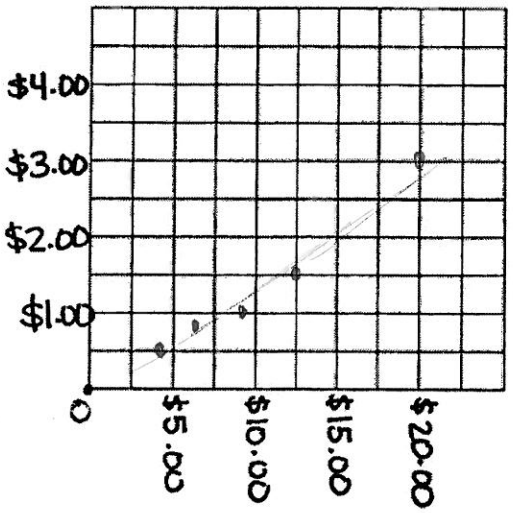
Ex of answers - answers will vary

Scatterplots and Lines of Best Fit BY HAND Name Key

For each of the following, write the prediction equation and then solve the problem.

1. A student who waits on tables at a restaurant recorded the cost of meals and the tip left by single diners.

Meal Cost	$4.75	$6.84	$12.52	$20.42	$8.97
Tip	$0.50	$0.90	$1.50	$3.00	$1.00



If the next diner orders a meal costing $10.50, how much tip should the waiter expect to receive?

Equation $y = .11x + .15$

$(6.84, .90)(12.52, 1.50)$

$\frac{1.50 - .90}{12.52 - 6.84} = \frac{.6}{5.68}$

$m = .11$

$y = .11x + b$

$.90 = .11(6.84) + b$

$.90 = .7524 + b$

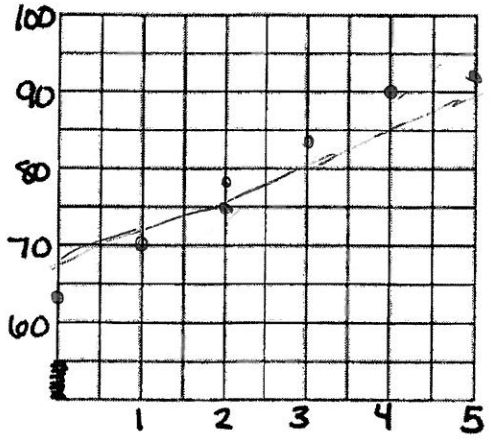
$b = .15$

$y = .11(10.50) + .15$

Tip expected $1.31

2. The table below gives the number of hours spent studying for a science exam (x) and the final exam grade (y).

X	2	5	1	0	4	2	3
Y	77	92	70	63	90	75	84



Predict the exam grade of a student who studied for 6 hours.

Equation $y = 5.67x + 63.66$

$(2, 75)(5, 92)$ $\frac{92 - 75}{5 - 2} = \frac{17}{3} = 5.67$

$y = 5.67 + b$

$75 = 5.67(2) + b$

$75 = 11.34 + b$

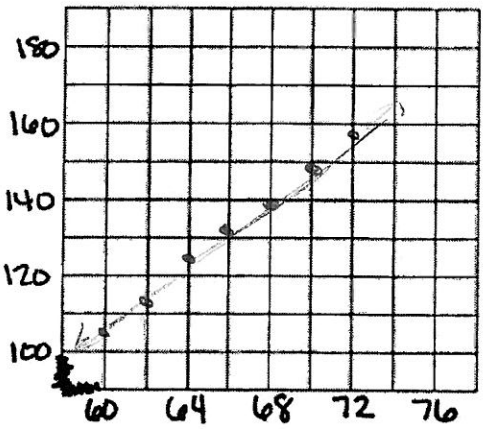
$b = 63.66$

$y = 5.67(6) + 63.66$

Grade expected 97.68%

3. The table below shows the lengths and corresponding ideal weights of sand sharks.

Length	60	62	64	66	68	70	72
Weight	105	114	124	131	139	149	158



Predict the weight of a sand shark whose length is 75 inches.

Equation $y = 4.17x - 144.54$

$(62, 114)(68, 139)$

$\frac{139-114}{68-62} = \frac{25}{6} = 4.17$

$y = 4.17x + b$

$114 = 4.17(62) + b$

$114 = 258.54 + b$

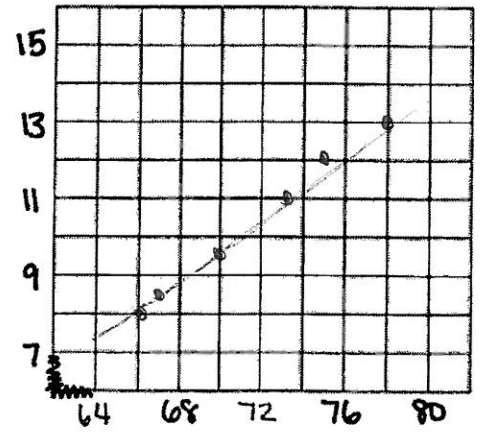
$b = -144.54$

$y = 4.17(75) - 144.54$

Weight expected 168.21 lb

4. The table below gives the height and shoe sizes of six randomly selected men and women.

Height	67	70	73.5	75	78	66
Shoe size	8.5	9.5	11	12	13	8



If a woman has a height of 60 in, what would be her predicted shoe size?

Equation $y = .44x - 21.32$

$(70, 9.5)(78, 13)$

$\frac{13-9.5}{78-70} = \frac{3.5}{8} = .44$

$y = .44x + b$

$13 = .44(78) + b$

$13 = 34.32 + b$

$b = -21.32$

$y = .44(60) - 21.32$

Height expected 5.08 ~ size 5