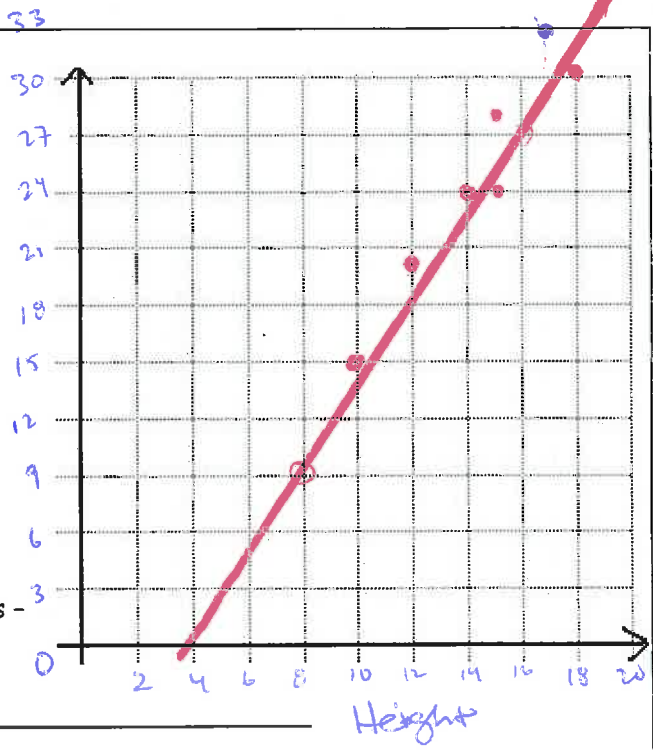


Name Exemplar

1 The following table has height in inches and weight of cats

Height (in)	Weight (lbs)
10	15 ✓
12	20 ✓
14	24 ✓
15	24 ✓
15	28 ✓
17	32 ✓
18	31 ✓
19	33

Label the x axis for height and Y axis (go by 5's) for weight. Plot points - Draw line of best fit



Equation - $y = 2.25x + 9$

$(16, 27)$
 $(8, 9)$
 $m = \frac{27 - 9}{16 - 8} = \frac{18}{8} = 2.25$

$y = mx + b$
 $9 = (2.25)(8) + b$
 $9 = 18 + b$
 $-18 -18$
 $-9 = b$

1. What type of correlation is shown on the graph?

Positive

2. List the window that you would use for this data:

x-min: 10 y-min: 15
 x-max: 19 y-max: 33

3. What does the slope of this data represent?

a cat's weight changes
 How much ~~weight~~ ~~cat~~ ~~changes~~ for every inch of its height.

4. According to this data, how heavy would a 30 inch cat weigh?

$y = 2.25x - 9$

5. According to this data, how tall would a 12 pound cat be?

about 9.5"

6. What do the x-intercept and y-intercept represent?

A cat that is about 4" tall would weigh 0 pounds
 The y-intercept would be negative and thus ~~not~~ have no meaning to the story

1. The graph below shows a line of best fit for data collected on the number of medium pizzas sold at local pizza shops and the amount of money earned in sales. Based on the line of best fit, how many pizzas were sold if \$97.50 was earned in sales?

$$m = \frac{195 - 65}{30 - 10} = \frac{130}{20} = 6.5$$

$$y = 6.5x$$

$$y = mx + b$$

$$65 = 6.5(10) + b$$

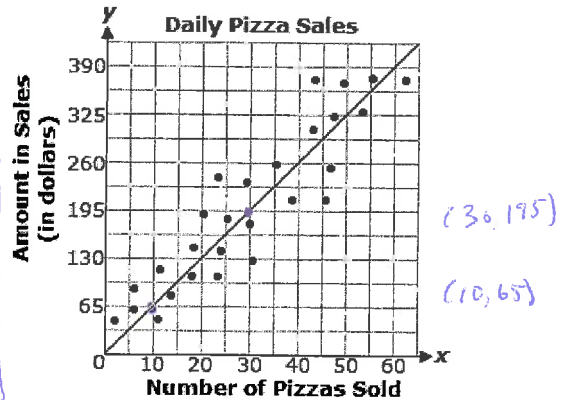
$$65 = 65 + b$$

$$0 = b$$

$$\frac{97.50}{6.5} = \frac{6.5x}{6.5}$$

$$15 = x$$

15 pizzas were sold to earn \$97.50.



2. The graph above shows a line of best fit for data collected on the amount of water bills in relation to the number of gallons of water used. What is the equation of the line of best fit?

$$m = \frac{28 - 14}{9 - 1} = \frac{14}{8} = 1.75$$

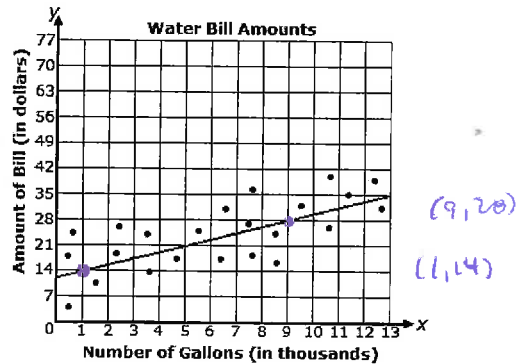
$$y = 1.75x + 12.25$$

$$y = mx + b$$

$$14 = 1.75(1) + b$$

$$14 = 1.75 + b$$

$$12.25 = b$$



3. The graph above shows a line of best fit for data collected on the distance bicyclists have remaining in relation to the amount of time they have been riding. What is the equation of the line of best fit?

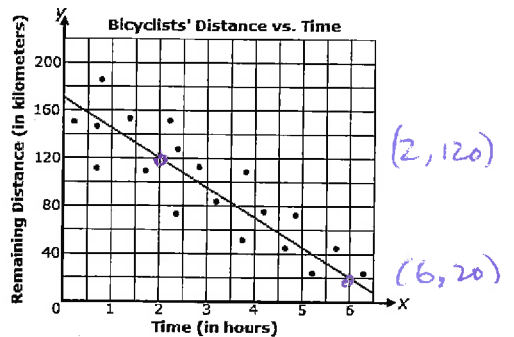
$$m = \frac{120 - 20}{2 - 6} = \frac{100}{-4} = -25$$

$$y = -25x + 170$$

$$y = mx + b$$

$$20 = -25 \cdot 6 + b$$

$$20 = -150 + b \rightarrow b = +170$$



4. A teacher made the following graph showing absences vs. final grades. Predict the grade of a student that has 6 absences.

$$m = \frac{95 - 80}{0 - 3} = \frac{15}{-3} = -5$$

$$y = mx + b$$

$$80 = -5(3) + b$$

$$80 = -15 + b$$

$$95 = b$$

$$y = -5x + 95$$

$$y = -5(6) + 95$$

$$y = -30 + 95 = 65$$

