

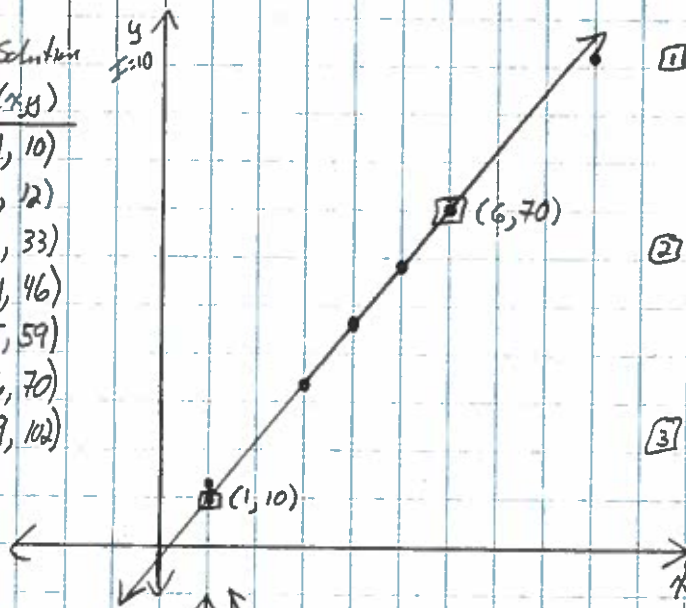
3. There is a positive correlation.

4. There is no correlation.

5. There is a negative correlation.

6.

Domain x	Range y	Solution (x,y)
1	10	(1, 10)
1	12	(1, 12)
3	33	(3, 33)
4	46	(4, 46)
5	59	(5, 59)
6	70	(6, 70)
9	102	(9, 102)



Positive Correlation

1 (1, 10) (6, 70)

$$m = \frac{\Delta y}{\Delta x} = \frac{70-10}{6-1} = \frac{60}{5}$$

$$m = 12$$

2 $y = mx + b$

$$10 = 12(1) + b$$

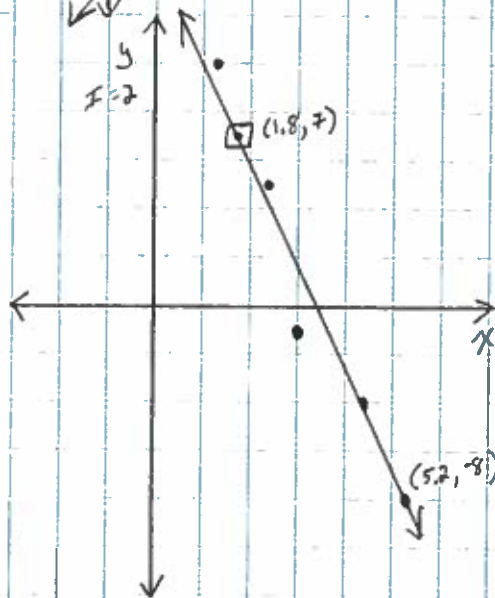
$$10 = 12 + b$$

$$b = -2$$

3 $y = 12x + (-2)$

7.

Domain x	Range y	Solution (x,y)
1.2	10	(1.2, 10)
1.8	7	(1.8, 7)
2.3	5	(2.3, 5)
3.0	-1	(3, -1)
4.4	-4	(4.4, -4)
5.2	-8	(5.2, -8)



Negative Correlation

1 (1.8, 7) (5.2, -8)

$$m = \frac{\Delta y}{\Delta x} = \frac{7-(-8)}{1.8-5.2} = \frac{15}{-3.4}$$

$$m \approx -4.4$$

2 $y = mx + b$

$$7 = (-4.4)(1.8) + b$$

$$7 = -7.92 + b$$

$$b \approx 14.92$$

3 $y = -4.4x + 14.9$

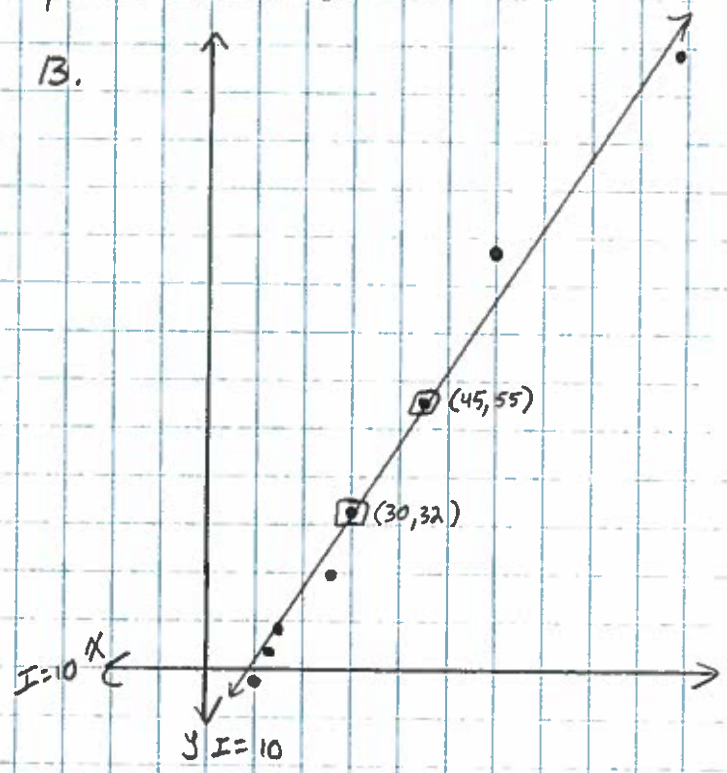
8. From the graph, there is a negative correlation. [Negative slope]
The model would cross the y-axis around (0, 8). [y-intercept]

The best answer is $y = -x + 8$.

9. The model drawn does not split the data in half.

A #26 continued
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13.



Positive Correlation

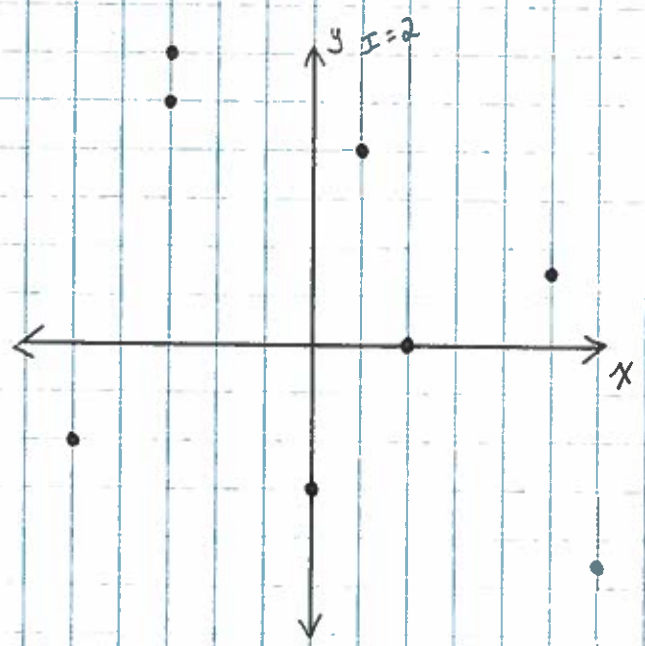
1) $(30, 32) (45, 55)$
 $m = \frac{\Delta y}{\Delta x} = \frac{55-32}{45-30} = \frac{23}{15}$

$m \approx 1.53$

2) $y = mx + b$
 $32 = 1.53(30) + b$
 $32 = 45.9 + b$
 $b \approx -15.9$

3) $y = 1.53x + (-15.9)$

14.



No correlation!

15. Line b is a better line because it splits the data in half.
 Line a does not split the data in half.