Review: Writing Equations of Lines

Convert each linear equation to Standard Form.

1) $y = \frac{3}{4}x$

2) $y = \frac{1}{4}x - 6$

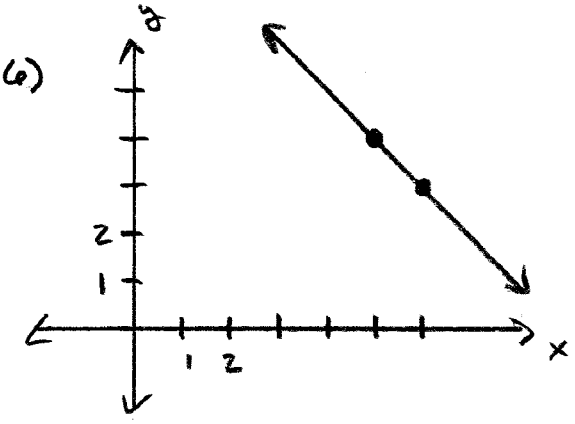
3) $y = \frac{2}{3}x - \frac{1}{2}$

4) $\frac{1}{6}y = 2x - 1$

Given the following information about each line, write the equation of the line in Slope-Intercept & Standard Form.

5) $m = -\frac{2}{3}$; passes through $(5, 4)$

6)



7) passes through $(-6, 1)$ & $(-8, 2)$

8) passes through $(0, 4)$; $\perp$ to $3x + 8y = 4$

9) passes through $(4, 0)$; $\parallel$ to $4x - 3y = 2$

10) passes through $(6, -7)$ & the origin

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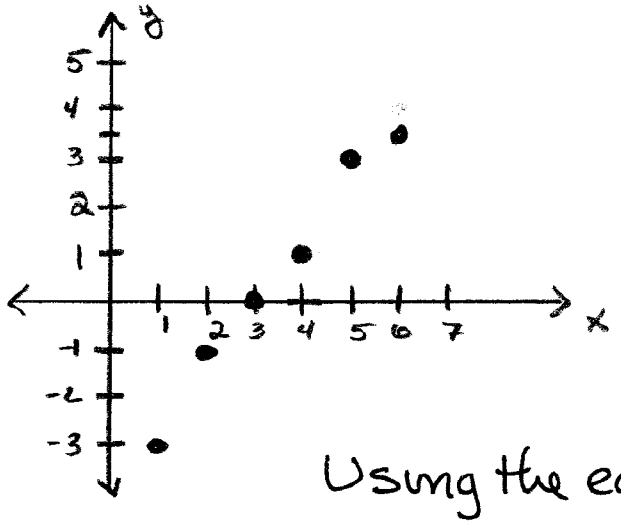
Below is a scatter plot of a data set.



11) on the scatter plot, draw the line of best fit.

12) describe the correlation shown on the scatter plot

13) write the equation of the line of best fit.

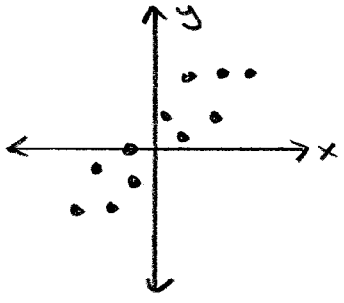
Using the equation from #13, ...

14) if $x = 20$, then $y = ?$

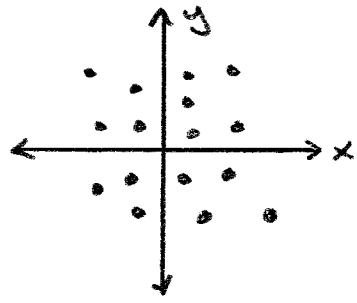
15) if $y = -6$, then $x = ?$

Tell whether it is reasonable for each graph to be represented by a linear model. Answer: yes or no.

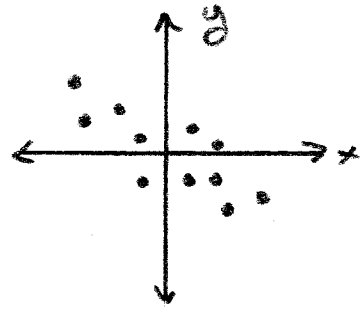
16)



17)



18)



Answers:

1) $3x - 4y = 0$

2) $x - 4y = 24$

3) $4x - 6y = 3$

4) $12x - y = 6$

5) $y = -\frac{2}{3}x + \frac{22}{3}$

$2x + 3y = 22$

6) $y = -x + 9$

$x + y = 9$

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Answers

7) $y = -\frac{1}{2}x - 2$

$x + 2y = -4$

8) $y = \frac{8}{3}x + 4$

$8x - 3y = -12$

9) $y = \frac{4}{3}x - \frac{16}{3}$

$4x - 3y = 16$

10) $y = -\frac{7}{6}x$

$7x + 6y = 0$

11) my line passes through (4,1) & (6, 3.5)

12) positive

13) $y = \frac{5}{4}x - 4$ (used: (4,1) & (6, 3.5))

14) $y = 21$

15) $x = -\frac{8}{5}$

16) yes

17) no

18) yes