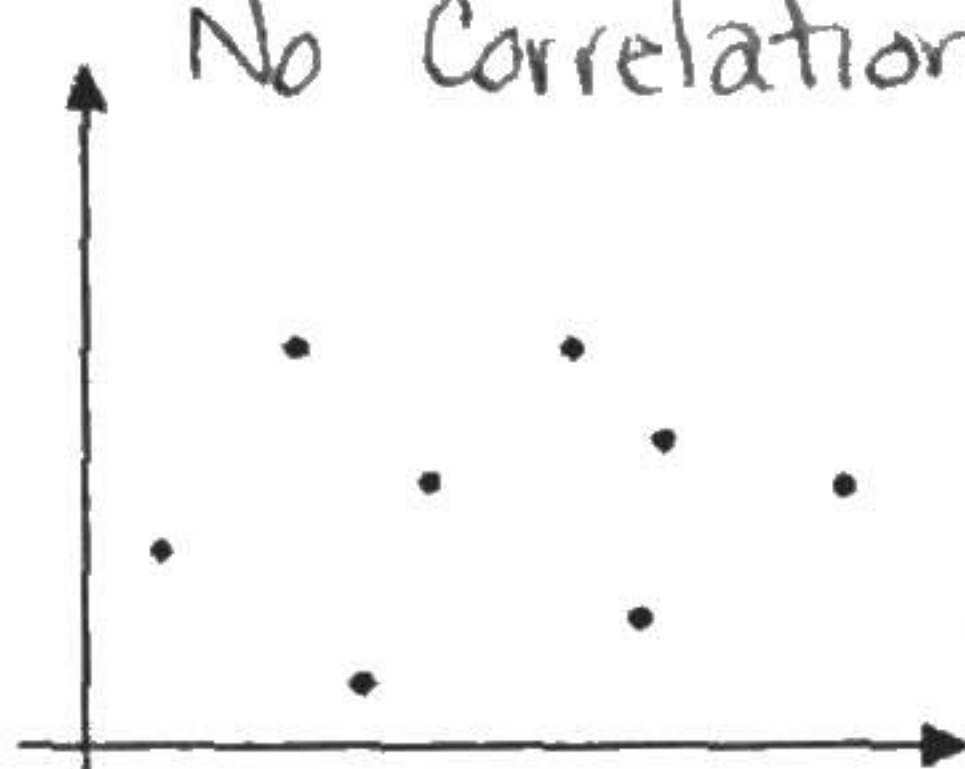
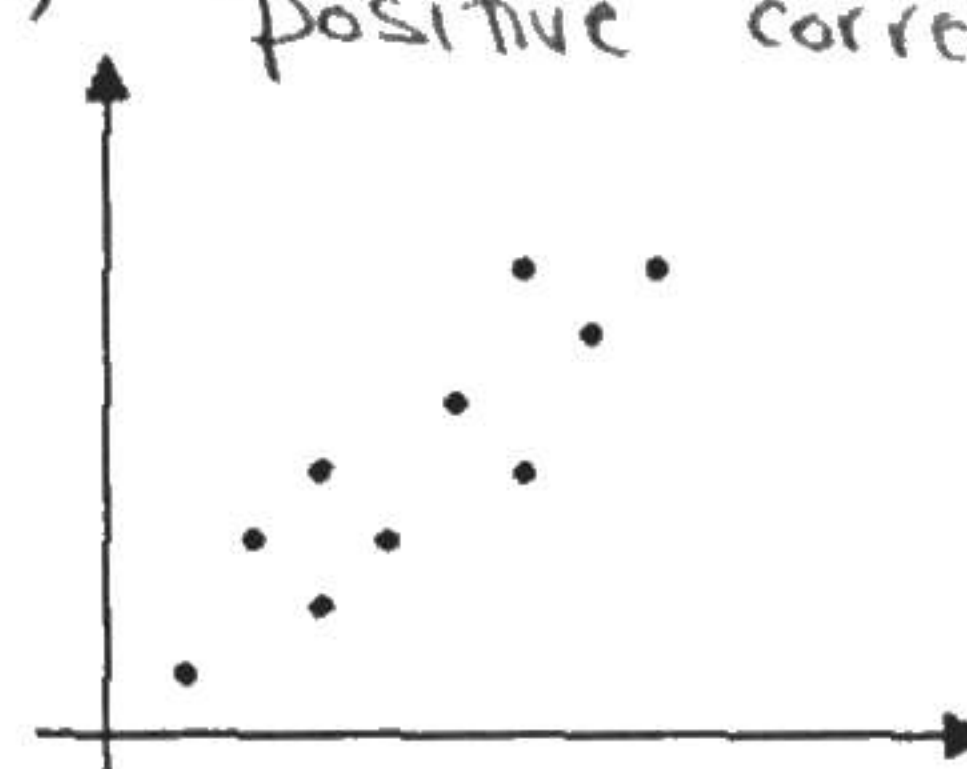


1-2 Describe the Correlation

3 - 5 Determine if it represents a function.

<p>1) No Correlation</p> 	<p>2) Positive correlation</p> 	<p>3) $\{(0,0), (1,-1), (2,-4), (3,-9), (4,-10)\}$ Function</p> <p>4) $\{(2,-6), (2,-2), (2,0), (2,3)\}$ Not a function</p> <p>5) $\{(3,2), (4,2), (5,3), (6,3)\}$ Function</p> <p>(every x can only be paired with one y)</p>
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6 - 9 Given $f(x) = 2x - 5$, $g(x) = -3x - 1$, and $h(x) = 2x^2 + x - 7$. FIND:

<p>6) $f(3)$</p> $f(3) = 2(3) - 5$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$f(3) = 1$</div>	<p>7) $g(0)$</p> $g(0) = -3(0) - 1$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$g(0) = -1$</div>	<p>8) $h(-2)$</p> $h(-2) = 2(-2)^2 + (-2) - 7$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$h(-2) = -1$</div>	<p>9) $g(-3)$</p> $g(-3) = -3(-3) - 1$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$g(-3) = 8$</div>
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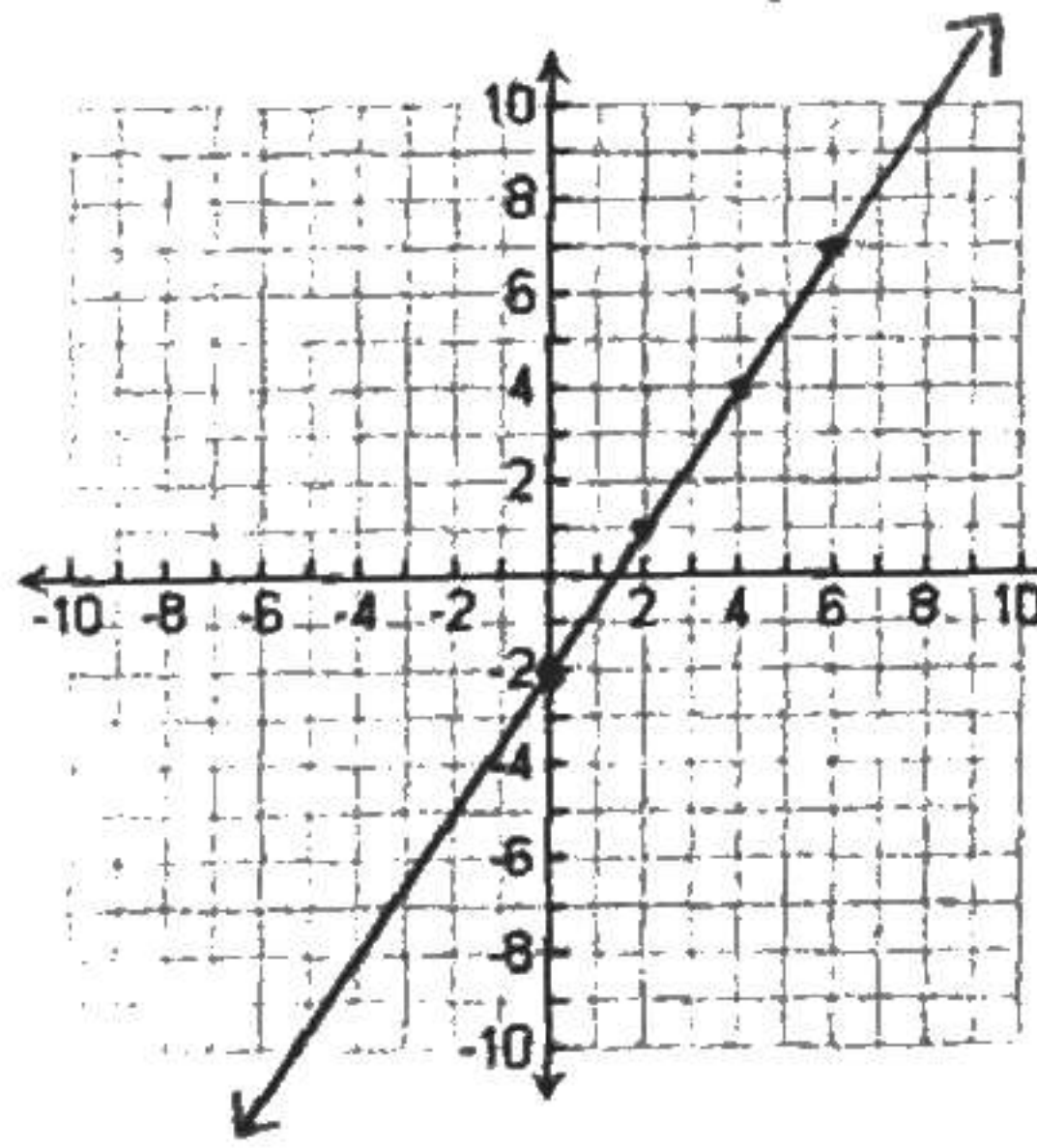
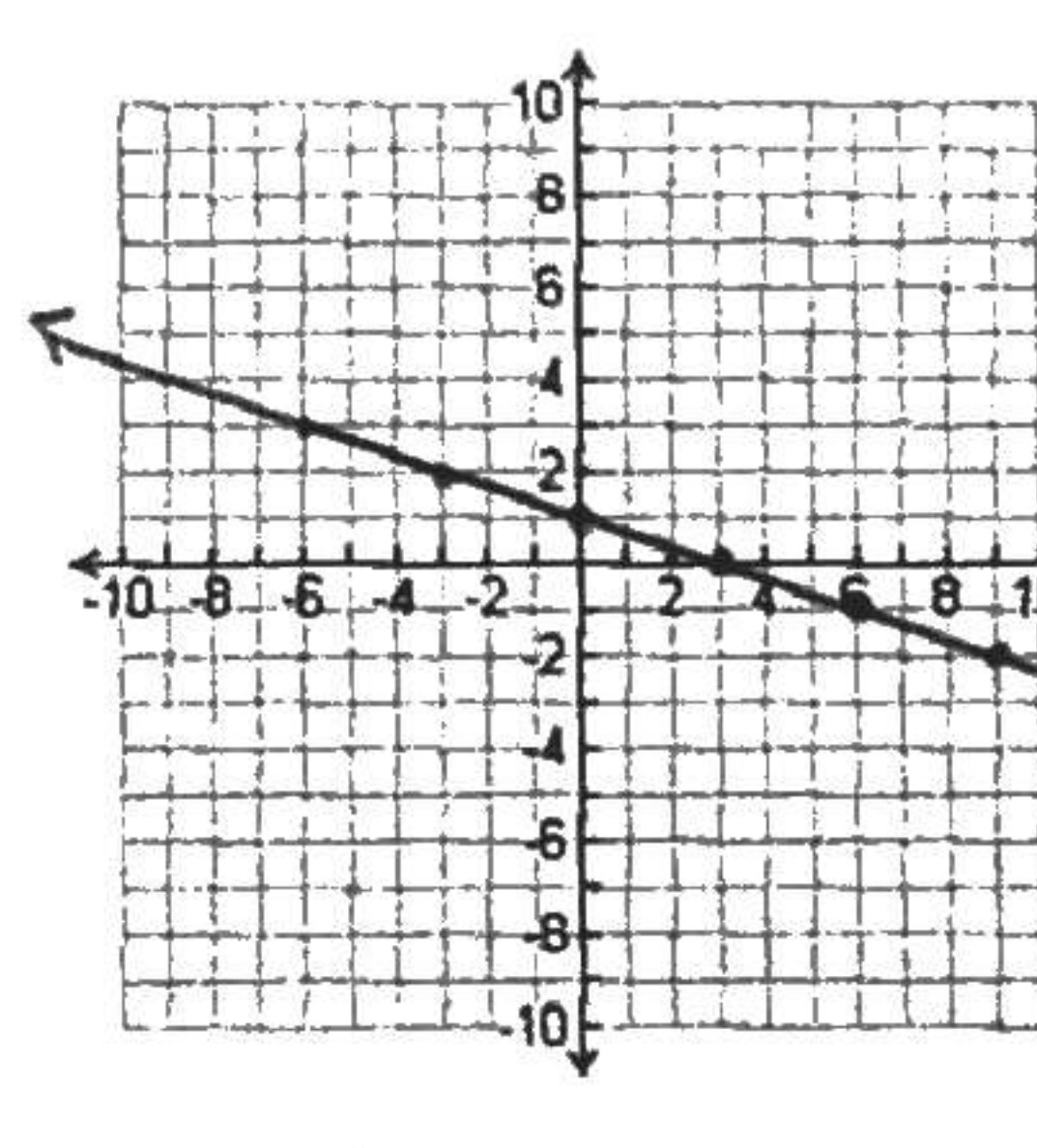
10 - 14 Describe the transformation and graph.

<p>10) $y = (x - 2)^2 - 6$</p> <ul style="list-style-type: none"> • horizontal trans 2 units right • vertical trans 6 units down 	<p>11) $y = x + 1 - 5$</p> <ul style="list-style-type: none"> • horizontal trans 1 unit left • vertical trans 5 units down 	<p>12) $y = -2 x + 3$</p> <ul style="list-style-type: none"> • vertical stretch by a factor of 2 • Reflected across x-axis • vertical trans 3 units up 	<p>13) $y = -2 x + 3$</p> <p>14) $y = -(x + 1)^2 + 2$</p> <ul style="list-style-type: none"> • Reflected across x-axis • horizontal trans 1 unit left • vertical trans 2 units up
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#18 - 20 Find the slope given the following information.

<p>18) $(3, -2)$ $(-4, -1)$</p> <p>x_1, y_1 x_2, y_2</p> $\frac{-1 - (-2)}{-4 - 3} = \frac{1}{-7}$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$-\frac{1}{7}$</div>	<p>19) $\frac{3y}{3} = \frac{-2x + 1}{3}$</p> $y = -\frac{2}{3}x + \frac{1}{3}$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$-\frac{2}{3}$</div>	<p>20) $4x - 2y = 7$</p> $\begin{array}{r} -4x \\ \hline -2y = -4x + 7 \\ \frac{-2y}{-2} = \frac{-4x + 7}{-2} \\ y = 2x - \frac{7}{2} \end{array}$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">2</div>
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#21 - 22 Given the slope and y - intercept, write the linear equation in slope intercept form and graph the lines

<p>21) slope: $\frac{3}{2}$, y - intercept: -2</p> 	<p>22) slope: $-\frac{1}{3}$, y - intercept: 1</p> 
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#23 - 25 Write the equation of a line that...

Same slope

opposite reciprocal

23) parallel to #21 and passes through the point (4, 1) in slope - intercept form

$$m = \frac{3}{2} \quad \text{point } (4, 1)$$

$$y - y_1 = m(x - x_1)$$

$$y - 1 = \frac{3}{2}(x - 4)$$

$$y - 1 = \frac{3}{2}x - 6$$

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

24) perpendicular to #22 and passes through the point (-2, 3) in slope intercept form

$$m = 3 \quad \text{point } (-2, 3)$$

$$y - y_1 = m(x - x_1)$$

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

$$y - 3 = 3x + 6$$

$$+3 \quad +3$$

$$y = 3x + 9$$

25) passes through the points (-3, -5) and (3, -7) in slope intercept form.

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{-7 - (-5)}{3 - (-3)}$$

$$= \frac{-2}{6} = -\frac{1}{3}$$

$$m = -\frac{1}{3} \quad \text{point } (-3, -5)$$

$$y - y_1 = m(x - x_1)$$

$$y + 5 = -\frac{1}{3}(x + 3)$$

$$y + 5 = -\frac{1}{3}x - 1$$

$$y = -\frac{1}{3}x - 6$$

26) What is the slope of a line that is perpendicular to a line with a slope of 2?

$$2 \rightarrow \boxed{-\frac{1}{2}}$$

m_{\perp}

#27 - 31: Solve the equation, inequality, or absolute value.

27) $x - 15 = 27$

$$x = 42$$

28) $-2x + 5 \leq 13$

$$-2x \leq 8$$

$$x \geq -4$$

29) $3x + 1 < x - 4$

$$2x + 1 < -4$$

$$2x < -5$$

$$x < -\frac{5}{2}$$

30) $2(x - 3) + 10 = x + 7$

$$2x - 6 + 10 = x + 7$$

$$2x + 4 = x + 7$$

$$-x + 4 = 7$$

$$-x = 3$$

$$x = -3$$

check:

$$2(3 - 3) + 10 = 3 + 7$$

$$2(0) + 10 = 10$$

$$10 = 10 \checkmark$$

31) $|x + 3| - 2 = 7$

$$|x + 3| = 9$$

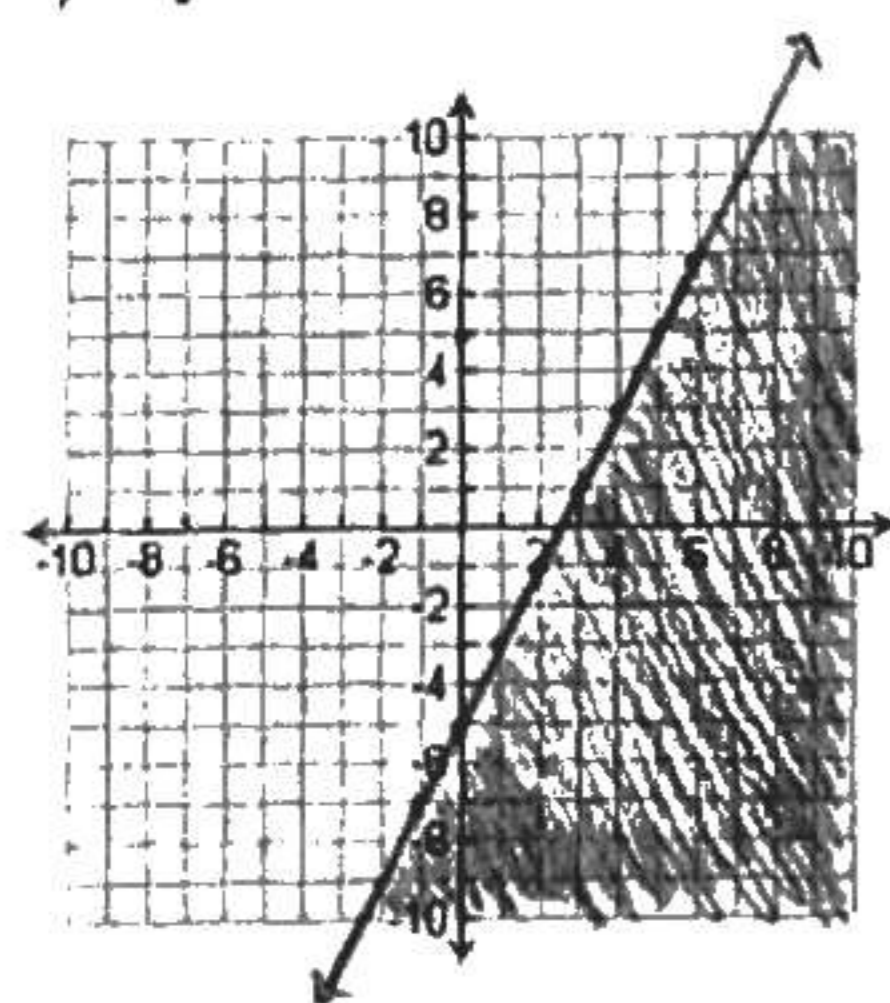
$$x + 3 = 9$$

$$x + 3 = -9$$

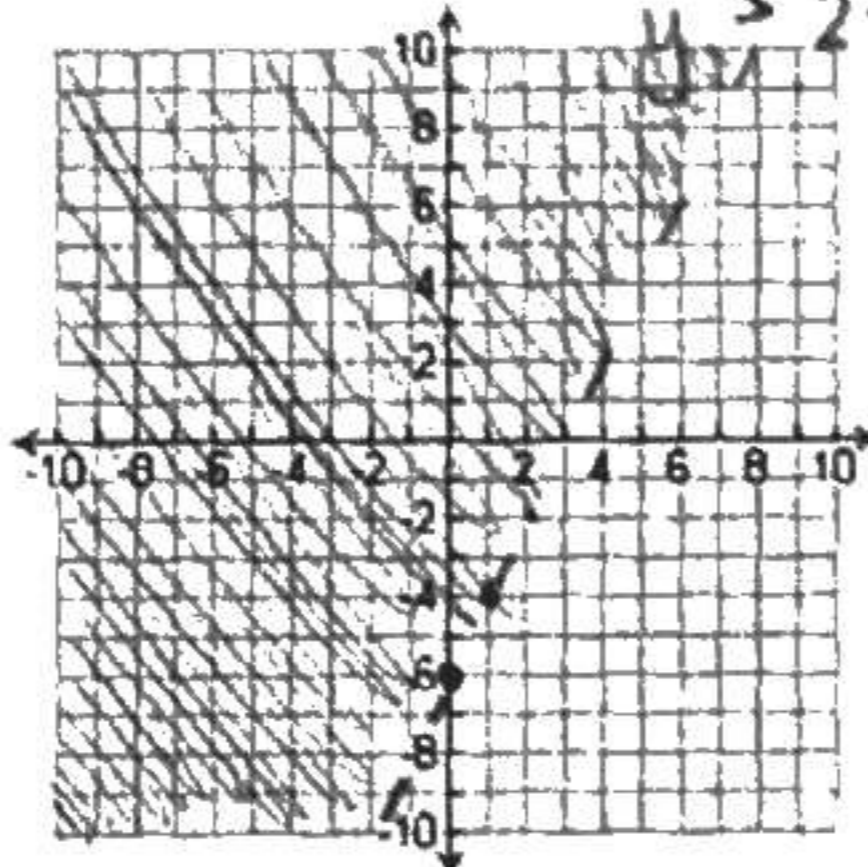
$$x = 6 \quad x = -12$$

#32 - 34 Graph each inequality.

32) $y \leq 2x - 5$



33) $4x - 2y < 12$



34) $\begin{cases} 3x - 3y \leq 6 \\ x \geq 0 \\ y \leq -2x + 4 \end{cases}$

$$3x - 3y \leq 6$$

$$-3y \leq -3x + 6$$

$$y \geq x - 2$$

