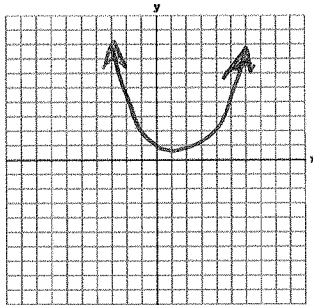


Algebra II Test #2

Name: Key

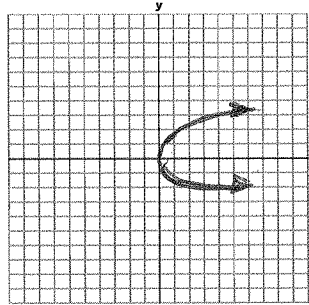
Determine if each is a function or Not.

1.



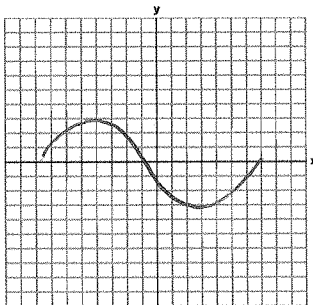
Yes

2.



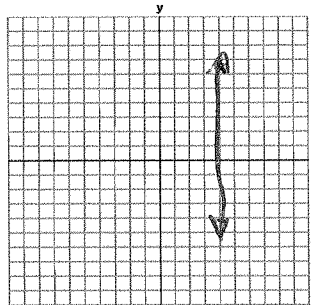
No

3.



Yes

4.



No

5. (3,4), (-2,9), (12,10), (-3,10) Yes

6. (-1,3), (-3,9), (-1,7), (-5,-5) No

7. Find each value of $f(x) = 10x - 5$ a) $f(3)$

$$f(3) = 10(3) - 5$$

$$= 25$$

b) $f(-3y)$

$$f(-3y) = 10(-3y) - 5$$

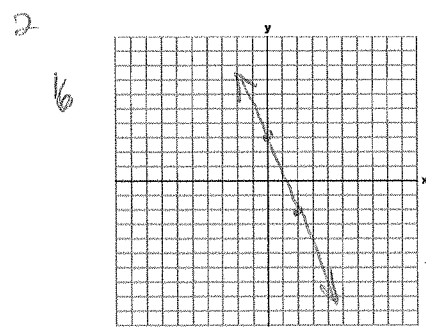
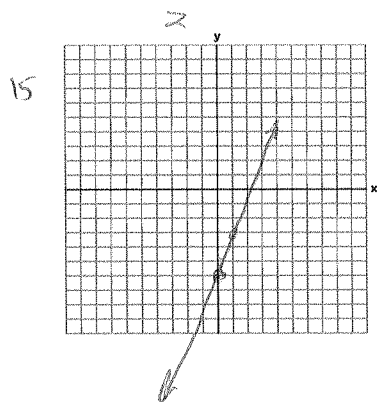
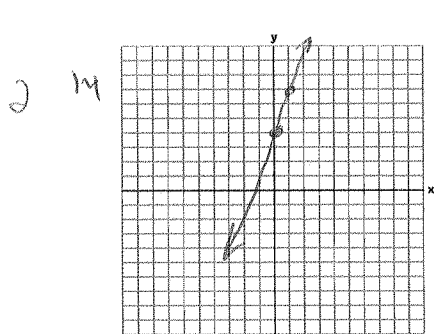
$$= -30y - 5$$

State whether each equation is linear. Write yes or no

- 1 8. $y = -3x + 4$ Yes 9. $x + y = 10$ yes
 10. $x^2 + 3y^2 = 1$ No 11. $x = 3$ yes
 12. $1/x + 3y = -12$ No 13. $3y + 4 = 10$ yes

Find the x-intercept and y-intercepts for each of the following.

- 2 14. $y = 3x + 4$ y-int: $\boxed{4}$ x-int $\boxed{x = -\frac{4}{3}}$
 $0 = 3x + 4$
 $-4 = 3x$ $x = -\frac{4}{3}$
- 2 15. $3x - 6 = y$ y-int = $\boxed{-6}$ x-int $\rightarrow 3x - 6 = 0$ $\boxed{x = 2}$
 $3x = 6$
 $x = 2$
- 2 16. $5x + 2y = 6$ y-int $\boxed{3}$ x-int $\boxed{x = \frac{6}{5}}$
 $2y = -5x + 6, y = -\frac{5}{2}x + 3$
17. Graph the equation in number 14-16 above.



18. Find the slope given the two points.

1 a) $(-3, -1), (5, 7)$ $m = \frac{7 - (-1)}{5 - (-3)} = \frac{8}{8} = \boxed{1}$

1 b) $(5, 1), (7, -3)$ $m = \frac{-3 - 1}{7 - 5} = \frac{-4}{2} = \boxed{-2}$

19. Find the slope

1 a) $x + y = 5$ $m = \boxed{-1}$

1 b) $3x - y = 12$
 $-y = -3x + 12$ $y = 3x - 12$ $m = \boxed{3}$

1 c) $3x - 4y = 0$
 $-4y = -3x$ $y = \frac{3}{4}x$ $m = \boxed{\frac{3}{4}}$

Write an equation in slope-intercept form that satisfies each condition.

2 20. Slope = 2 passes through (0, 4)
 $y = 2x + b$
 $4 = 0 + b$
 $b = 4$ $y = \boxed{2x + 4}$

2 21. Passes through (3, 11) and (-6, 5)
 $m = \frac{5 - 11}{-6 - 3} = \frac{-6}{-9} = \frac{2}{3}$
 $y = \frac{2}{3}x + b$
 $11 = \frac{2}{3}(3) + b$
 $b = 9$ $y = \boxed{\frac{2}{3}x + 9}$

2 22. Passes through (1, 2) and is parallel to the graph of $y = -3x + 7$
 $m = -3$
 $y = -3x + b$
 $2 = -3(1) + b$
 $b = 5$ $y = \boxed{-3x + 5}$

(11)

2 23. Passes through $(-2, 0)$ perpendicular to the graph of $y = -3x + 7$

$$m = \frac{1}{3}$$

$$y = \frac{1}{3}x + b$$

$$0 = \frac{1}{3}(-2) + b$$

$$0 = -\frac{2}{3} + b$$

$$b = \frac{2}{3}$$

$$y = \frac{1}{3}x + \frac{2}{3}$$

(2)