

Algebra 2 – Chapter 2 Review

Name: \_\_\_\_\_ Hour: \_\_\_\_\_

Find the slope of the line crossing through the two points.

1.  $(8, -4)$  &  $(3, 5)$

2.  $(4, -15)$  &  $(-6, -11)$

3.  $(12, 7)$  &  $(12, -3)$

Find the equation of the line in slope-intercept form. Then convert the equation to standard form.

4. Slope = 2;  $y$ -int =  $(0, 3)$

5. Slope = 3; & passes through  $(-1, 7)$

Standard Form: \_\_\_\_\_

Standard Form: \_\_\_\_\_

6. Passes through  $(-3, 8)$  &  $(6, 5)$

7.  $m = -\frac{1}{4}$ ;  $b = 6.3$

Standard Form: \_\_\_\_\_

Standard Form: \_\_\_\_\_

8. Find the equation of the line that is parallel to  $x - 2y = 8$  and passes through  $(4, -3)$ .

9. Find the Equation of the line that passes through  $(-4, -1)$  and is perpendicular to the line passing through  $(-15, 7)$  &  $(-3, 3)$ .

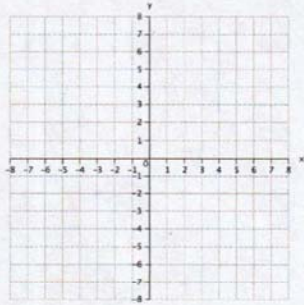
10. Find the equation of the line that passes through  $(4, 5)$  and is perpendicular to  $x + 6y = -3$ .

11. Find the equation of the line that passes through the  $x$ -intercept of  $2x - 3y = 6$  and is perpendicular to  $x + 6y = -3$ .

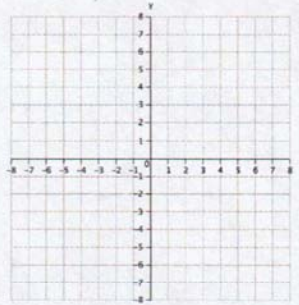


**Graph the following equations.**

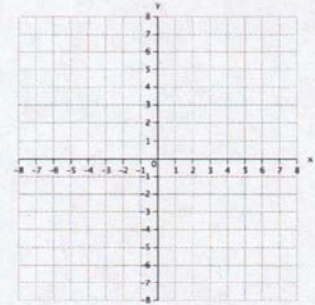
12.  $y = \frac{3}{2}x + 3$



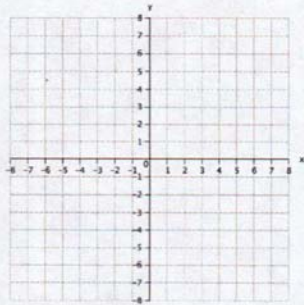
13.  $y = -5x - 2$



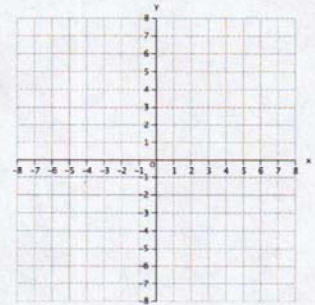
14.  $-\frac{2}{5}x - 5$



15.  $5x - 2y = -15$



16.  $2x + 3y = 12$



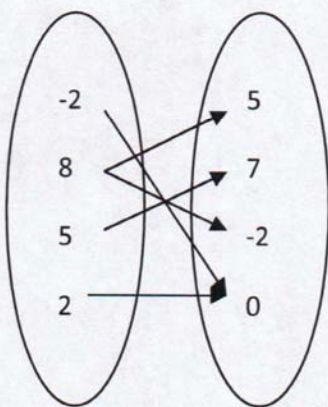
**State whether the following relations are functions.**

17.  $\{(3, -5), (8, 1), (-3, -3), (5, 1)\}$

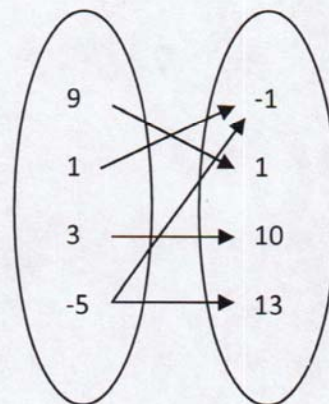
18.  $\{(9, -2), (0, 0), (7, 4), (9, 3)\}$

19.  $\{(6, 2), (4, -1), (-1, 8), (4, 1)\}$

20.



21.



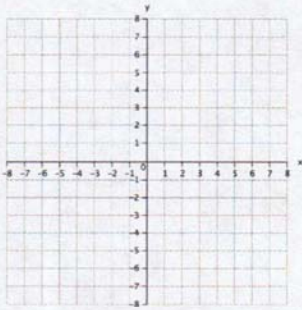


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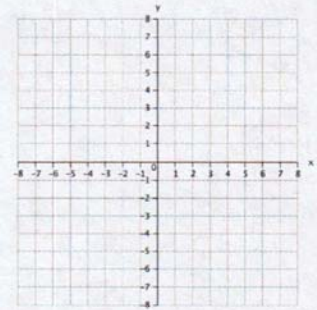
Name: \_\_\_\_\_ Hour: \_\_\_\_\_

Graph the following linear inequalities.

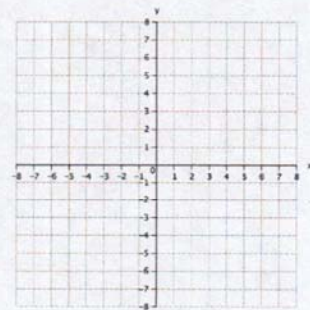
22.  $3x - 4y > 20$



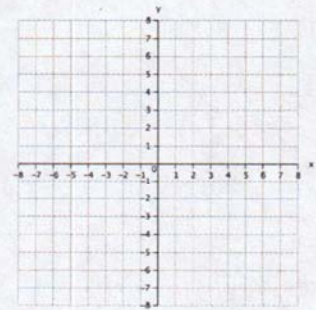
23.  $y < -\frac{1}{2}x - 3$



24.  $y \leq -3x + 8$

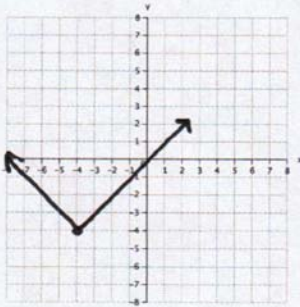


25.  $8x + 4y \geq -20$



State the domain and range of the following graphs.

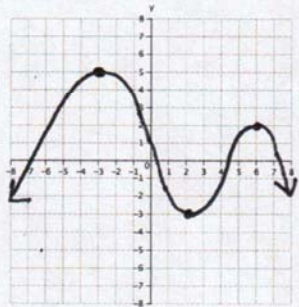
26.



D: \_\_\_\_\_

R: \_\_\_\_\_

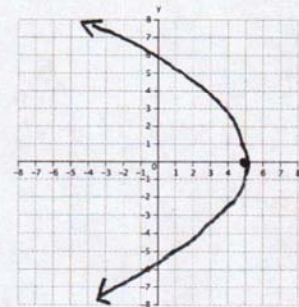
27.



D: \_\_\_\_\_

R: \_\_\_\_\_

28.



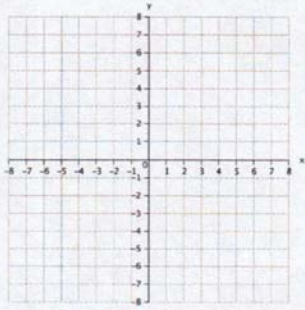
D: \_\_\_\_\_

R: \_\_\_\_\_

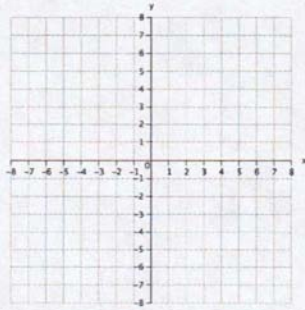


**Graph the following Absolute value equations.**

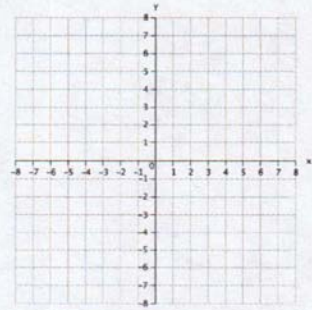
29.  $y = -|x + 3| + 7$



30.  $y = \frac{1}{3}|x|$



31.  $y = -|x - 2| + 3$



**State the transformation of the following absolute value functions from the parent function  $y = |x|$ .**

32.  $y = -|x + 1|$

\_\_\_\_\_

33.  $f(x) = 3\left|x - \frac{1}{2}\right| + 6$

\_\_\_\_\_

34.  $k(x) = -0.5|x| - 7.15$

\_\_\_\_\_

35.  $p(x) = \left|x + \frac{2}{3}\right| - 5$

\_\_\_\_\_

36.  $m(x) = -|x| + 3$

\_\_\_\_\_

37.  $t(x) = \frac{1}{2}|x + 6| - 10$

\_\_\_\_\_

38.  $f(x) = -\frac{4}{5}|x + 1|$

\_\_\_\_\_

39.  $y = 8|x| + 7$

\_\_\_\_\_

40.  $k(x) = |x + 1.25| - 4.25$

\_\_\_\_\_

41.  $g(x) = -\frac{11}{4}|x - 2|$

\_\_\_\_\_

**Solve the following problems for x.**

42.  $-7 < 8 + \frac{5}{6}x$

43.  $10 - \frac{3}{4}x < -8$

44.  $2x - 5 = -17$

45.  $-\frac{1}{2}x + 5 = 14$

46.  $\left|\frac{1}{2}x + 3\right| = 9$

47.  $2|6x - 11| + 2 = 82$