Chapter 7 Quiz

Solve for x.

1) $6(3x - 5) = 36$

2) $5x + 11 - 7x = 12 - 2x$

3) $7(4x + 3) = 10 - 5x$

4) $6x - 2(x + 4) = 15 - 5x$

5) $\frac{16}{x} = \frac{6}{12}$

6) $\frac{x+3}{10} = \frac{12}{21}$

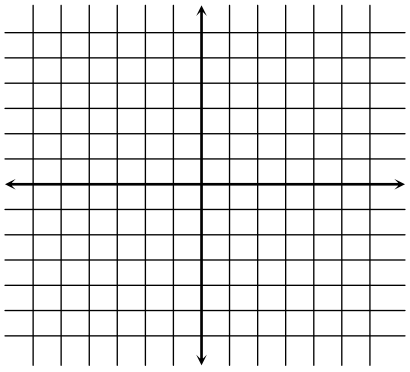
Solve and graph on a number line.

7) $7x - 2 \leq 12$

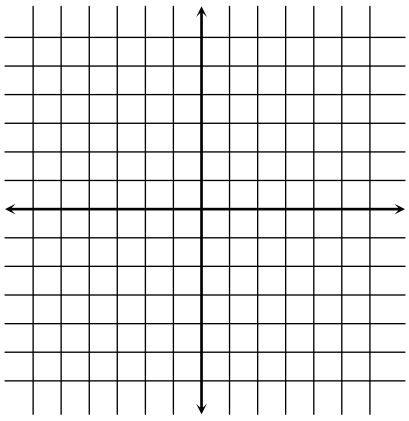
8) $10 - 2x \leq 25$

Graph the following linear equations.

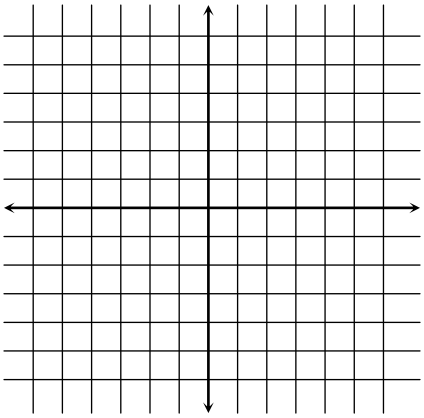
9) $y = \frac{-3}{5}x + 4$



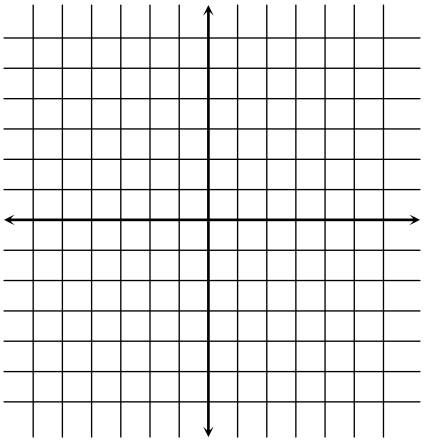
10) $7x - 2y = 8$



11) $x = 5$



12) $y = -5$



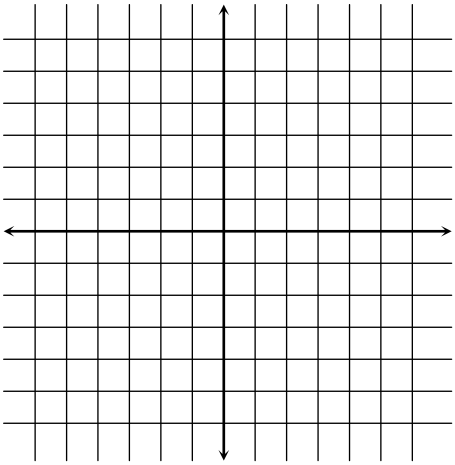
13) Write $9x - 3y = 12$ in slope intercept form.

14) Find the x and y intercepts of the equation $5x - 9y = 45$.

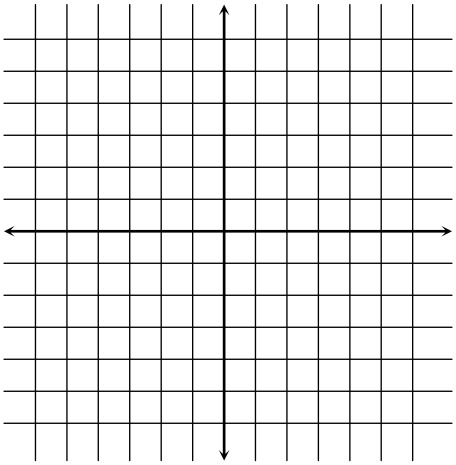
15) Find the slope of the line through the two points (-5, -7) and (2, 7).

Graph the following quadratic functions using the vertex and a table.

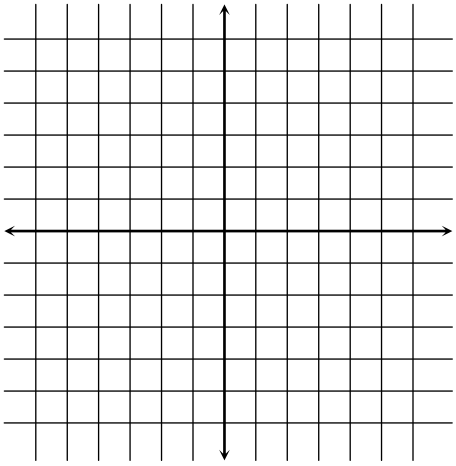
16) $y = -4x^2 + 5$



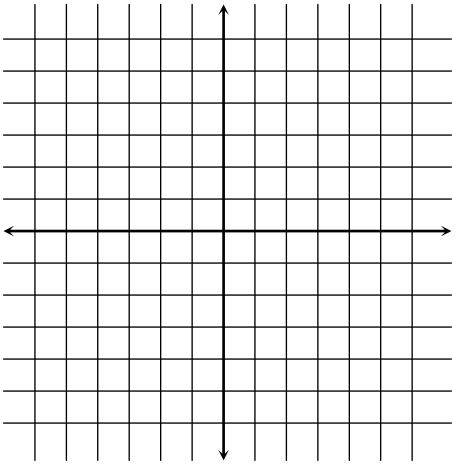
17) $y = 2x^2 - 4x - 1$



18) $y = (x - 3)^2 - 4$

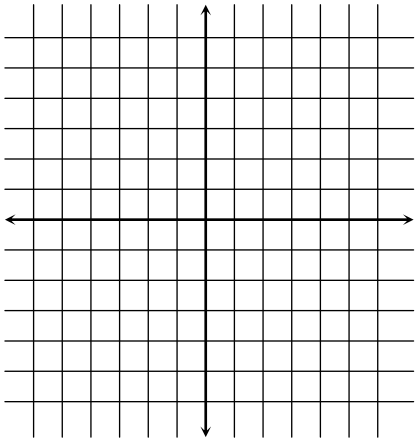


19) $y = -3(x + 2)^2 + 5$

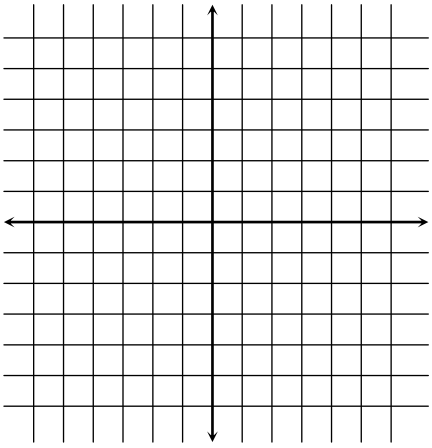


Graph each exponential function.

20) $f(x) = 2^x + 3$



21) $f(x) = e^{-x} + 3$



22) Joe fired off a rocket. The velocity of the rocket after the burn was 64ft per second and the height of the rocket after the burn was 72 ft.

a. What was the maximum height of the rocket?

b. How long did it take to reach this maximum height?

c. How long did it take for the rocket to touch the ground?

d. How long did it take for the rocket to reach 40 ft?

23) 1) A parabolic suspension bridge has a main span of 900 *ft* and the maximum height of the bridge is approximately 200 *ft*.

a) Find the quadratic function that will model the height of the bridge given the horizontal distance from the center of the bridge.

b) Find the height of the bridge from the road when the horizontal distance from the center is 60 *ft*.