

Chapter 2 &3 Practice Test Algebra 2

Solve for x .

1) $5(7x - 2) = 30$

2) $6x + 22 - 3x = 12 + 8x + 10 - 5x$

3) $4(2x + 5) = 3 - 3x$

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

5) $\frac{17}{x} = \frac{7}{21}$

6) $\frac{x+7}{10} = \frac{13}{12}$

7) $|3x - 6| = 12$

8) $|x - 2| = -3$

Solve and graph on a number line.

9) $5x - 7 \leq 8$

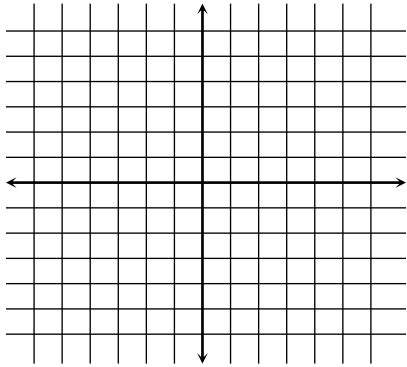
10) $7 - 3x \leq 40$

11) $|4x - 3| \geq 19$

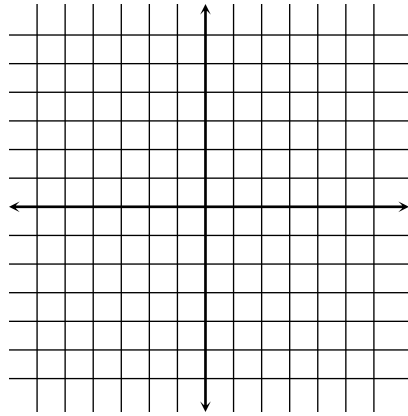
12) $|7x + 3| < 24$

Graph the following linear equations.

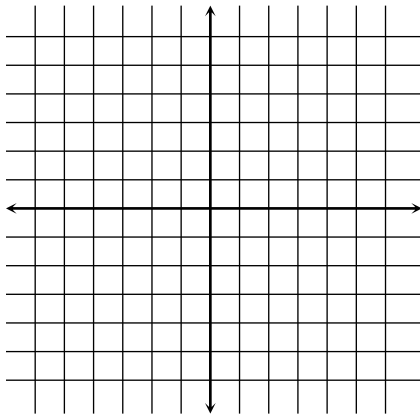
13) $y = \frac{-2}{3}x + 5$



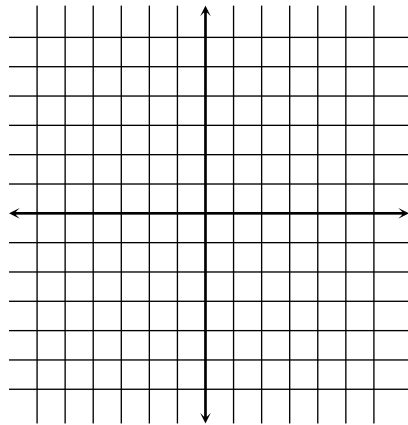
14) $3x - 4y = 12$



15) $x = -3$



16) $y = 4$



17) Write $5x - 6y = 18$ in slope intercept form.

18) Find the x and y intercepts of the equation $3x - 5y = 15$.

19) Find the slope of the line $5x - 3 = 7$.

Find the equations of each line below.

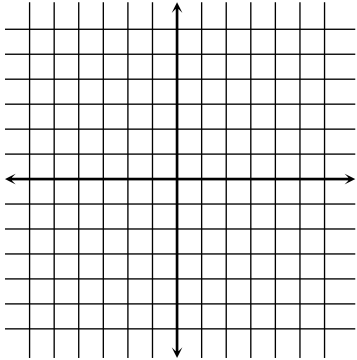
20) $m = \frac{4}{7}$, through $(0, 5)$

21) $m = -\frac{2}{3}$, through $(-12, 7)$

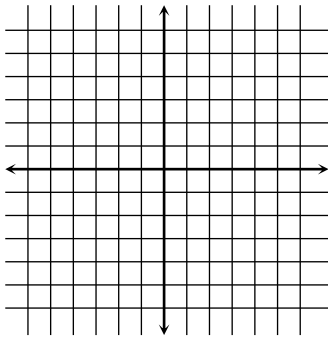
22) Find the equation of the line through the two points $(-3, -4)$ and $(3, 8)$.

23) Find the equation of the line perpendicular to $7x - 2y = 3$ and goes through the point $(14, 5)$.

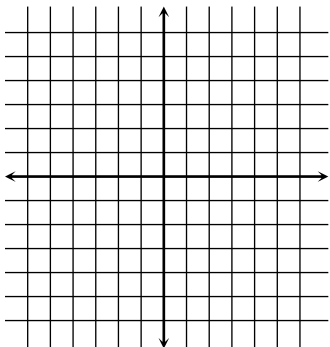
24) Graph the inequality $7x - 2y < 10$ on a rectangular coordinate system.



25) Graph the system of inequalities below; $5x + 2y < 4$ and $2x - 3y \leq 9$



26) Graph the absolute value function $f(x) = 3|x - 1| - 2$ on a rectangular coordinate system.



Solve by substitution.

$$\begin{aligned} 27) \quad & 2x - 3y = -10 \\ & y = 3x + 1 \end{aligned}$$

$$\begin{aligned} 28) \quad & y = 3x + 4 \\ & y = 7x + 12 \end{aligned}$$

Solve by elimination method.

$$\begin{aligned} 29) \quad & 2x + 3y = -7 \\ & 5x + 2y = -1 \end{aligned}$$