

Algebra 1
Practice problems
Quiz today 4.3-4.4

Ch. 4 MCT 4.1-4.4 Wed.

whiteboards

Example 1

Write an equation of a line in slope-intercept form with slope -5 and y -intercept -3. Then graph the equation.

$$y = mx + b$$

$$y = -5x + -3$$

Example 2

Write an equation of the line that passes through (3, 2) with a slope of 5.

$$y = mx + b$$

$$2 = 5 \cdot 3 + b$$

$$2 = 15 + b$$

$$\begin{array}{r} -15 \quad -15 \\ \hline -13 = b \end{array}$$

$$y = 5x + -13$$

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

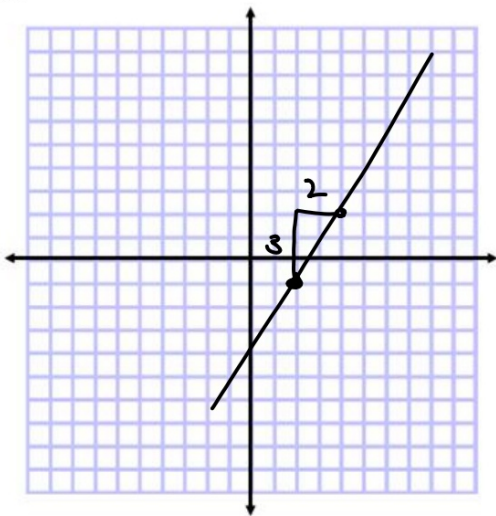
Write an equation of the line that passes through the given points.

23. $(2, -1), (5, 2)$

24. $(-4, 3), (1, 13)$

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

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



14. Write an equation in point-slope form for the line that passes through the point $(8, 3)$, $m = -2$. (Lesson 4-3)

$$y = mx + b$$

$$y - 3 = -2(x - 8)$$

$$\begin{array}{rcl} y - 3 & = & -2x + 16 \\ +3 & & +3 \end{array}$$

$$\hline y = -2x + 19$$

16. Write $y + 4 = -7(x - 3)$ in slope-intercept form.

(Lesson 4-3)

$$\begin{array}{r} y + 4 = -7x + 21 \\ -4 \qquad \qquad -4 \\ \hline y = -7x + 17 \end{array}$$

23. $(0, -3); y = -2x + 4$



$$m = -2$$

$$y = -2x + B$$

$$-3 = -2 \cdot 0 + B$$

$$-3 = 0 + B$$

$$-3 = B$$

parallel

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

24. $(-4, -5); -4x + 5y = -6$ perpendicular

$$+4x \quad +4y \quad m = -\frac{5}{4}$$

$$\frac{5y}{5} = \frac{4x}{5} + \frac{-6}{5}$$

$$\frac{-3x}{-1} + \frac{7y}{-1} = \frac{15}{-1}$$

$$y = mx + B$$

$$-5 = -\frac{5}{4}(-4) + B$$

$$-5 = 5 + B$$

$$\begin{array}{r} -5 \\ -5 \end{array}$$

$$\hline -10 = B$$

$$y = -\frac{5}{4}x + -10$$

$$+\frac{5}{4}x \quad +\frac{5}{4}x$$

$$4 \cdot \frac{5}{4}x + 4y = -40$$

$$5x + 4y = -40$$

$$3x - 7y = -15$$

Standard form:

- in order
- integers
- no GCF (also: A must be pos.)

$$\frac{2x}{2} + \frac{4y}{2} = \frac{8}{2}$$

$$x + 2y = 4$$

~~5~~

$$6. \quad y = \frac{1}{2}x + 6 \quad (4, 2)$$

MCQ p. 246
odds + 22, 24