Algebra 1
Practice problems
~~Quiz today 4.3 4.4~~

Ch. 4 MCT 4.1-4.4 Fri.
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.

$m = 5$

$y - 2 = 5(x - 3)$

$y = mx + B$

$2 = 5 \cdot 3 + B$

$2 = 15 + B$

$-15 \quad -15$

$-13 = B$

$y = 5x + -13$

$y = 5x - 13$

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

23. (2, −1), (5, 2)

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

$y - 2 = 1(x - 5)$

$2 = 1 \cdot 5 + B$

$-\frac{2}{5} = -\frac{5}{5} + B$

$-3 = B$

$y = 1x + -3 \quad y = x + -3$

24. (−4, 3), (1, 13)

$m = \frac{10}{5} = 2$

$13 = 2 \cdot 1 + B$

$13 = 2 + B$

$-2 \quad -2$

$11 = B$

$y = 2x + 11$

$y + 13 = 2(x - 1)$

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

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

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

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

(Lesson 4-3)

$y = mx + B$

$y + 4 = -7x + 21$

$-4 \qquad\quad -4$

$y = -7x + 17$

23. (0, −3); $y = -2x + 4$ parallel

$m = -2$

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

$-3 = 0 + B$

$+0 \quad +0$

$-3 = B$

$y = -2x + -3$

$y + 3 = -2(x - 0)$

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

perpendicular

$+4x \quad\quad 4x$

$m = -\frac{5}{4}$.

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

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

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

$-5 = -\frac{5}{4} \cdot -4 + B$

$-5 = \frac{20}{4} + B$

$-5 = 5 + B$

$-5 \quad -5$

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

Standard form: $Ax + By = C$

- in order
- integers
- no GCF

$y = 2x + 5$

$-2x \quad -2x$

$-1 \cdot -2x + y = -1 \cdot 5$

$2x - y = -5$

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

$$-\frac{1}{2}x \qquad -\frac{1}{2}x$$

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

$$\frac{2}{2}x$$

$$x - 2y = -6$$