

Equations of Lines: The Finale—Pre-Test

1. Define the following terms in your own words:
 - a. Slope-intercept form **Form of an equation of a line, $y = mx + b$ in which the slope and y -intercept are easily identifiable.**
 - b. Point-slope form **Form of an equation of a line, $y - y_1 = m(x - x_1)$ used to create an equation of a line when given a point and the slope.**
 - c. Standard form **Form of an equation of a line, $Ax + By = C$, where the coefficient of x is positive and contains no fractions.**
2. Given the following pieces of information in each problem, use the appropriate form of an equation of a line (slope-intercept or point-slope) to write an equation in slope-intercept form.

a. Given: $m = \frac{2}{3}$
point (0, 4)

$$y = \frac{2}{3}x + 4$$

b. Given: $m = -\frac{4}{5}$
 y -intercept: (0, 2)

$$y = -\frac{4}{5}x + 2$$

c. Given: points (-1, 4) and (6, 2)

$$y = -\frac{2}{7}x + \frac{26}{7}$$

d. Given: $m = 3$
point (5, 7)

$$y = 3x - 8$$

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2. Given the following pieces of information in each problem, use the appropriate form of an equation of a line (slope-intercept or point-slope) to write an equation in slope-intercept form.

a. Given: $m = \frac{3}{4}$
point (0, 7)

$$y = \frac{3}{4}x + 7$$

b. Given: $m = -\frac{2}{9}$
 y -intercept: (0, 3)

$$y = -\frac{2}{9}x + 3$$

c. Given: points (−2,5) and (7,1)

$$y = -\frac{4}{9}x + \frac{37}{9}$$

d. Given: $m = 2$
point (4, 6)

$$y = 2x - 2$$