

SC Algebra 1
4.3 Slope Intercept Form

Warm Up:

Find the slope of the line that passes between these points.

1. $(-5, 3)$ and $(11, 6)$
2. $(-1, 8)$ and $(4, -2)$
3. $(3, -4)$ and $(3, 12)$

Solve the equation for y.

4. $2y + 8 = 6x$

Speak Like A Mathematician

slope-intercept form:

Example 1: Write Linear Equations in Slope-Intercept Form

a) Write an equation in slope intercept form for the line with a slope of $\frac{4}{7}$ and a y-intercept of $(0, 5)$.

b) Write an equation in slope intercept form for the line with a slope of -5 and a y-intercept of $(0, 12)$.

c) $m = -2.6$; $b = (0, -5.5)$

d) $m = 6$; $b = \left(0, \frac{2}{5}\right)$

Example 2: Rewrite Equations in Slope-Intercept Form

Rewrite each equation in Slope-Intercept Form

a) $-22x + 8y = 4$

b) $-16x - 4y = -56$

c) $-2x - 8y = 24$

Example 3: Write Linear Equations

a) The number of job openings in the United States during a recent year increased by an average of 0.06 million per month since May. In May, there were about 4.61 million job openings in the United States. Write an equation in slope intercept form to represent the number of job openings in the months since May.

b) In the first quarter of 2012, there were 183 million users of a popular social media site in North America. The number of users increased by an average of 9 million per year since 2012. Write an equation in slope-intercept form that represents the number of users in millions of the social media site after 2012.