Algebra – Slope

Slope-Intercept Form	Standard Form	Point-Slope Form
$y = mx + b$	$Ax + By = C$	$(y - y_1) = m(x - x_1)$
m is the slope and b is the y-intercept.	A and B are not both 0.	(x_1, y_1) lies on the graph of the equation, and m is the slope.

Examples

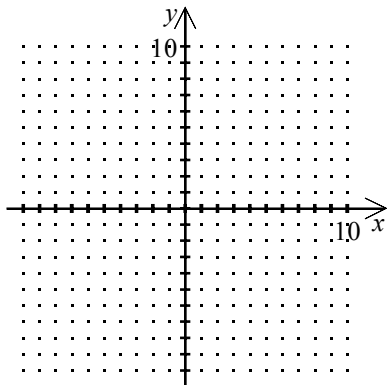|		
$y = -\frac{2}{3}x + \frac{5}{3}$	$2x + 3y = 5$	$y - 1 = -\frac{2}{3}(x - 1)$

In 1-4, each equation is in point-slope form. Identify the point and slope of each equation and use them to graph a line.
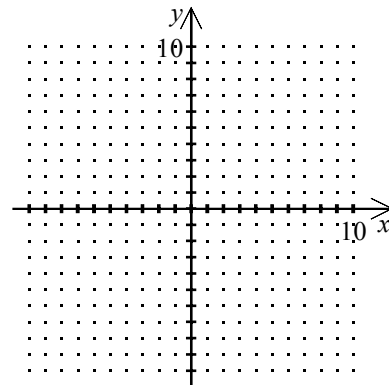
1. $y - 2 = \dfrac{2}{3}(x - 5)$

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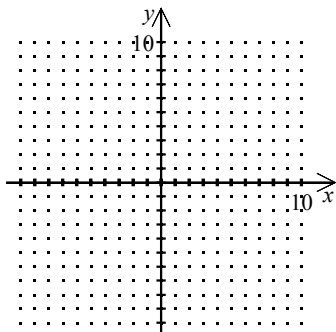
point: (,   ), m = _____

2. $y - 4 = -3(x - 2)$
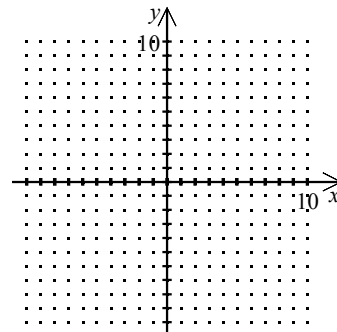
point: (,   ), m = _____

1. $y - 4 = -\dfrac{3}{2}(x + 4)$

point: (,   ), m = _____

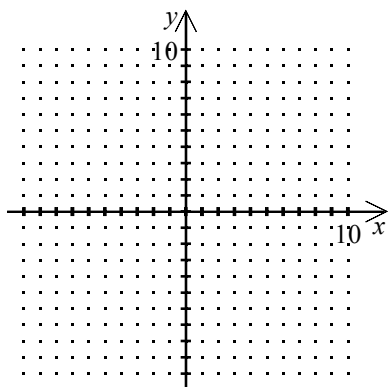2. $y + 5 = 4(x + 2)$

point: (,   ), m = _____

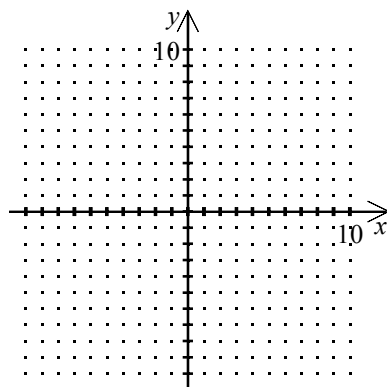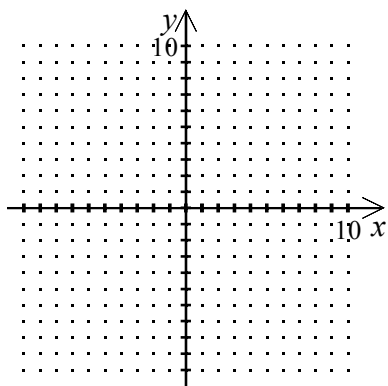| **Slope-Intercept Form**	**Slope-Intercept Form**
5. Use the **slope and *y*-intercept** to graph the equation. $y = \dfrac{1}{2}x - 5$ m = _____, b = _____	6. Use the **slope and *y*-intercept** to graph the equation. $y = -\dfrac{3}{2}x + 6$ m = _____, b = _____

Standard Form	**Standard Form**
7. Graph the equation using **x- and y-intercepts**.	8. Graph the equation using **x- and y-intercepts**.
$3x + 7y = 21$	$-5x + 7y = 35$
x-intercept: _____, y-intercept: _____	x-intercept: _____, y-intercept: _____