Principles of Algebra Name/Date Clee / Today

# WS 7B.1 – Graphing with Slope and y- Intercept

Put each equation into slope-intercept form, then graph.

1. $3y = 6x$

$\frac{3}{3} \quad \frac{3}{3}$

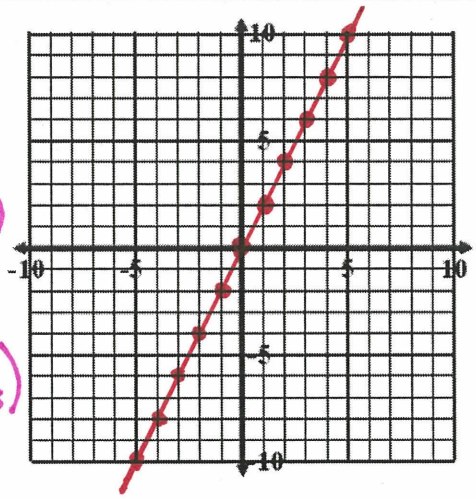
$y = mx + b$ (solve equation for y)

$y = 2x + 0$

$m$ (slope) $b$ (y-intercept)

$m = \frac{2}{1}$ ← rise (up 2) / run (right 1)

$b = 0$ ← y-intercept (start at this point on y-axis)



2. $5x + 2y + 10 = 0$

$-5x \quad -10 \quad -5x - 10$

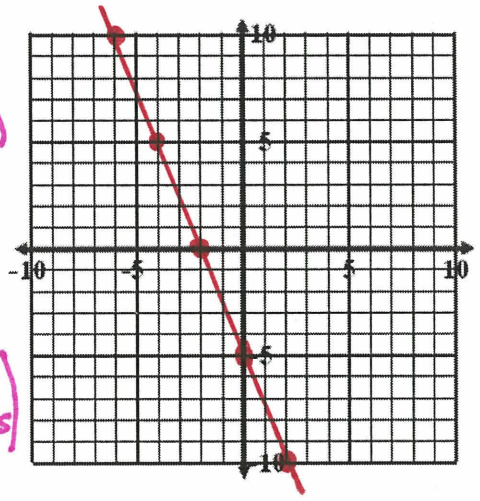
$\frac{2y}{2} = \frac{-5x}{2} - \frac{10}{2}$

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

$m$ (slope) $b$ (y-intercept)

$m = \frac{-5}{2}$ ← rise (down 5) / run (right 2)

$b = -5$ ← y-intercept (start at this point on y-axis)



3. $2y - 3x = 2$

$+3x \quad +3x$

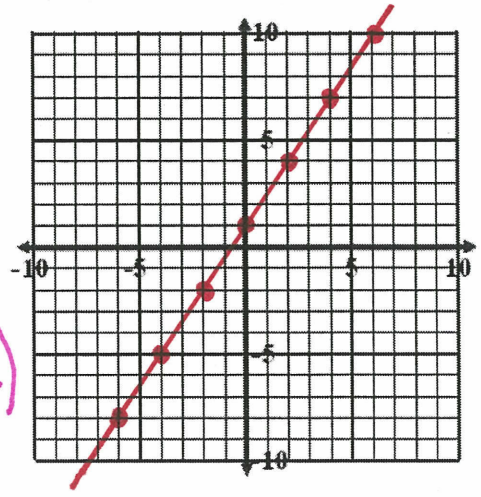
$\frac{2y}{2} = \frac{3x}{2} + \frac{2}{2}$

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

$m$ (slope) $b$ (y-intercept)

$m = \frac{3}{2}$ ← rise (up 3) / run (right 2)

$b = 1$ ← y-intercept (start at this point on y-axis)



4. $\frac{y}{2} - \frac{x}{3} = \frac{1}{4}$ ·12 ·12 ·12

$6y - 4x = 3$

$+4x \quad +4x$

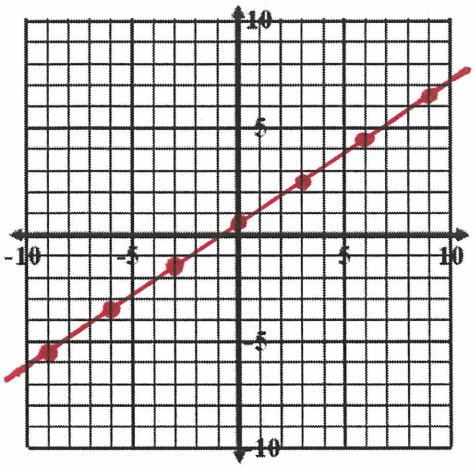
$\frac{6y}{6} = \frac{4x}{6} + \frac{3}{6}$

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

m b

$m = \frac{2}{3}$ ← rise (up 2) / run (right 3)

$b = \frac{1}{2}$ ← y-intercept (start at this point on y-axis)




5. $x + 4 = y - 1$

$+1 \quad +1$

$x + 5 = y$

OR

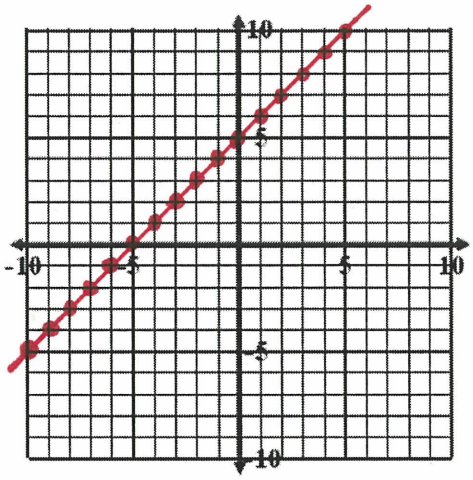
$y = 1x + 5$

m b

(slope) (y-intercept)

$m = \frac{1}{1}$ ← rise (up 1) / run (right 1)

$b = 5$ ← y-intercept (start at this point on y-axis)




6. $3x + 5y = 15$

$-3x \quad -3x$

$\frac{5y}{5} = \frac{-3x}{5} + \frac{15}{5}$

$y = \frac{-3}{5}x + 3$

m b

(slope) (y-intercept)

$m = \frac{-3}{5}$ ← rise (down 3) / run (right 5)

$b = 3$ ← y-intercept (start at this point on y-axis)