Principles of Algebra Name/Date Clee/Today

# WS 7C.1 – Graphing Using x- and y- Intercepts

Identify the *x*- and *y*- intercepts. Then use them to graph each line.

**1.** $2x - 3y = -6$

To find x-int: set y = 0.

$2x - 3(0) = -6$

$2x = -6$

$x = -3$

x-int (-3, 0)

To find y-int, set x = 0.

$2(0) - 3y = -6$

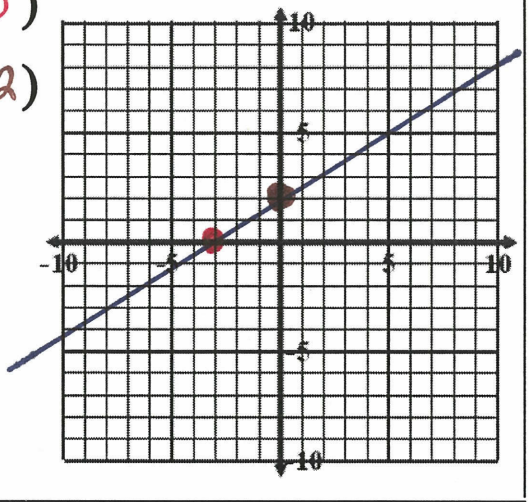
$-3y = -6$

$y = 2$

y-int (0, 2)

*x*-intercept (-3, 0)

*y*-intercept (0, 2)



**2.** $4x + y = 4$

To find x-int, set y = 0.

$4x + (0) = 4$

$4x = 4$

$x = 1$

x-int (1, 0)

To Find y-int, set x = 0.

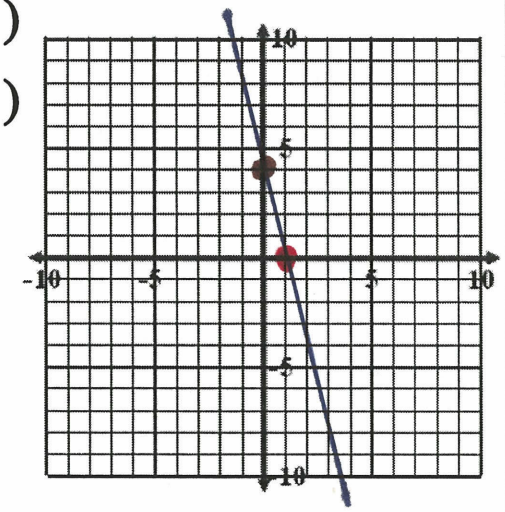
$4(0) + y = 4$

$y = 4$

y-int (0, 4)

*x*-intercept (1, 0)

*y*-intercept (0, 4)



**3.** $x - y = 3$

To find x-int: set y = 0.

$x - (0) = 3$

$x = 3$

x-int (3, 0)

To find y-int, set x = 0.

$(0) - y = 3$

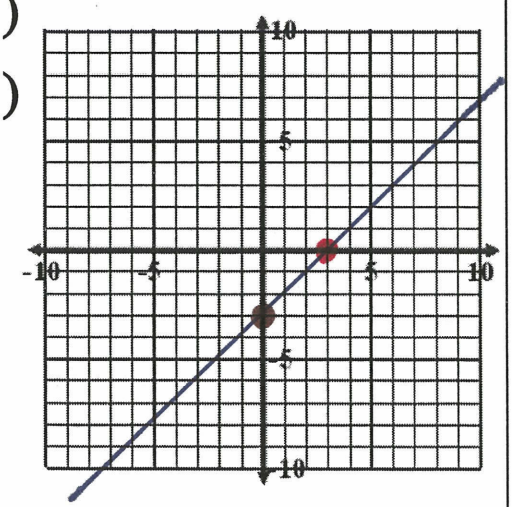
$-y = 3$

$y = -3$

y-int (0, -3)

*x*-intercept (3, 0)

*y*-intercept (0, -3)



4. $y = -2x - 2$

To find x-int, set $y = 0$.

$0 = -2x - 2$

$2 = -2x$

$-1 = x$

x-int $(-1, 0)$

x-intercept $(-1, 0)$

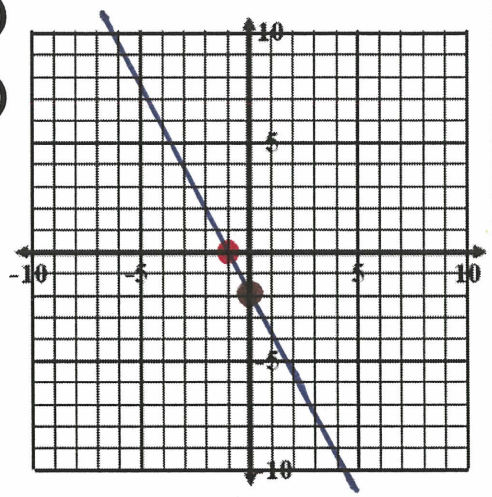
y-intercept $(0, -2)$

To find y-int, set $x = 0$.

$y = -2(0) - 2$

$y = -2$

y-int $(0, -2)$




5. $y = -\frac{5}{6}x + 5$

To find x-int, set $y = 0$.

$0 = -\frac{5}{6}x + 5$

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

$6 = x$

x-int $(6, 0)$

x-intercept $(6, 0)$

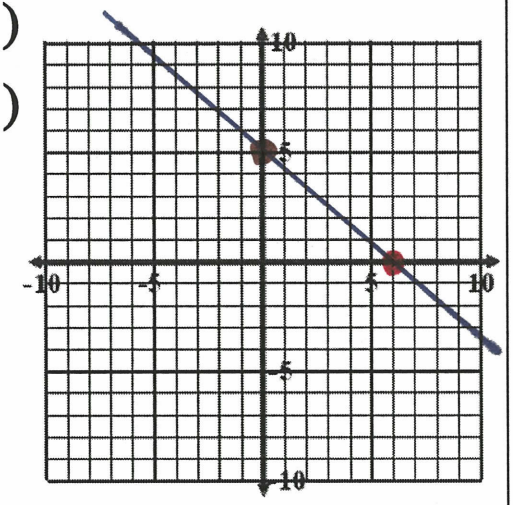
y-intercept $(0, 5)$

To find y-int, set $x = 0$.

$y = -\frac{5}{6}(0) + 5$

$y = 5$

y-int $(0, 5)$




6. $y = \frac{1}{4}x$

To find x-int, set $y = 0$.

$0 = \frac{1}{4}x$

$0 = x$

x-int $(0, 0)$ ← Since $x = 0$, this is also the y-intercept!

x-intercept $(0, 0)$

y-intercept $(0, 0)$

We will not have the two points necessary to graph our line using the intercept method. We'll need to use slope. $y = \frac{1}{4}x + 0$ ($m$, $b$)

Is it even possible to use the intercept method to graph this line?