

MGF /

Finding x- and y-intercepts of a line given the equation: Advanced

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Find the y-intercept and x-intercept of the line.

$$5x + 7y = -8$$

y-intercept:
 x-intercept:

$y = mx + b$
 $m = \text{slope}$ $\frac{\text{rise}}{\text{run}}$ $\frac{+}{-}$ $\frac{\text{up/down}}{\text{right}}$
 $b = y\text{-intercept}$ starting point $x = 0$
 (x, y) any point on line

to find intercepts:

	x	y
y int	$x = 0$	
x int		$y = 0$

$y \text{ int } x = 0$
 $5(0) + 7y = -8$
 $7y = -8$
 $y = -\frac{8}{7}$
 $(0, -\frac{8}{7})$

$x \text{ int } y = 0$
 $5x + 7(0) = -8$
 $5x = -8$
 $x = -\frac{8}{5}$
 $(-\frac{8}{5}, 0)$

Finding x- and y-intercepts of a line given the equation: Advanced

Find the y-intercept and x-intercept of the line.

$$3x + 5y = -9$$

y-intercept:
 x-intercept:

$x \text{ int } y = 0$
 $3x + 5(0) = -9$
 $3x = -9$
 $x = -3$
 $(-3, 0)$

$y \text{ int } x = 0$
 $3(0) + 5y = -9$
 $5y = -9$
 $y = -\frac{9}{5}$
 $(0, -\frac{9}{5})$

$x \text{ intercept: } y = 0$
 $y \text{ intercept: } x = 0$

x	y
0	0

$y = mx + b$
 $m = \text{slope}$ $\frac{\text{rise}}{\text{run}}$ $\frac{+}{-}$ $\frac{\text{up/down}}{\text{right}}$
 $b = y \text{ intercept (starting point)}$
 (x, y) any point on the line