Algebra 1 3.2

X= Solve linear equations by graphing

Estimate solutions to a linear equation by graphing

linear function
parent function
family of graphs
x-intercept

$2y = 5$ $x^3 + 3x = y$

$5x = -20$ $xy + 5x = 1$

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

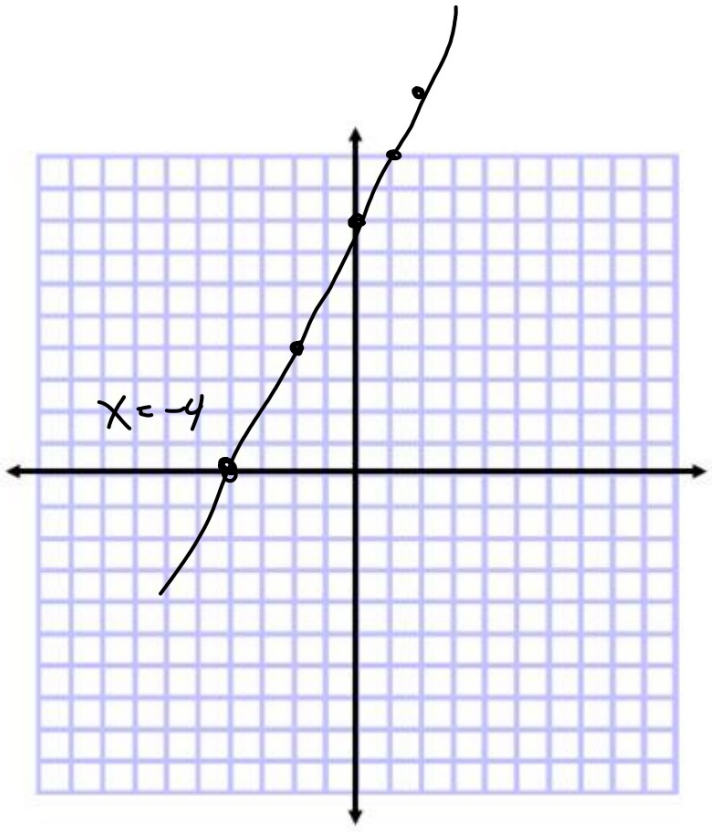
$2x + 8 = 0$

$2 \cdot -4 + 8 = 0$

$-8 + 8 = 0$

$y = 2x + 8$

x	$2x+8$	
0	$2 \cdot 0 + 8$	8
2	$2 \cdot 2 + 8$	12
1	$2 \cdot 1 + 8$	10
-2	$2 \cdot -2 + 8$	4



$3 \cdot 2 + 5 = 11$

$6 + 5 = 11$

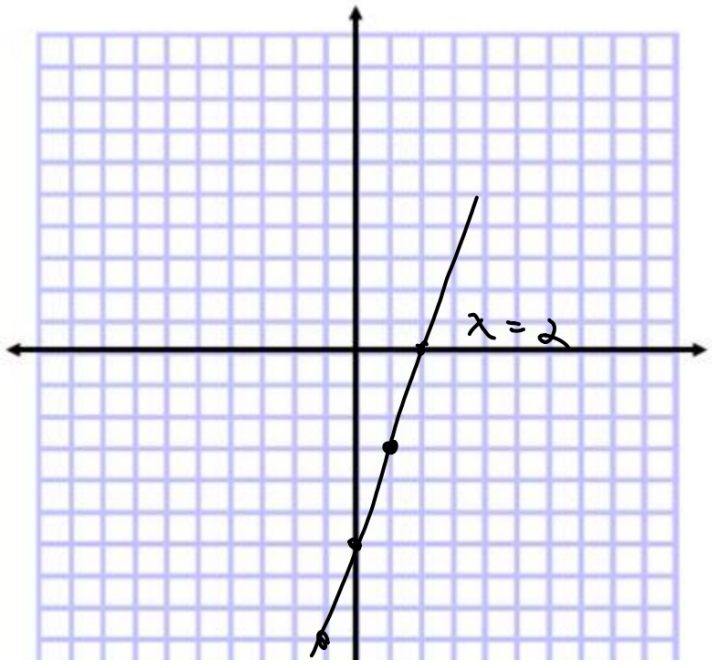
$$3x + 5 = 11$$

$-11 \quad -11$

$$3x - 6 = 0$$

$$y = 3x - 6$$

1	$3 \cdot 1 - 6$	-3
0	$3 \cdot 0 - 6$	-6
-1	$3 \cdot -1 - 6$	-9
2	$3 \cdot 2 - 6$	0



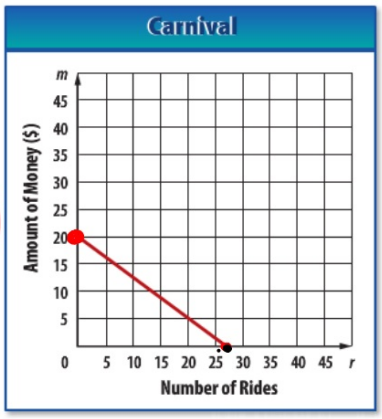
Find the zero= what is the x-intercept? (where y = 0)

Real-World Example 3 Estimate by Graphing

CARNIVAL RIDES Emily is going to a local carnival. The function $m = 20 - 0.75r$ represents the amount of money m she has left after r rides. Find the zero of this function. Describe what this value means in this context.

x-int

(0, 20)



$m = 20 - 0.75r$

$0 = 20 - 0.75r$

$+0.75r \quad +0.75r$

$0.75r = 20$

$.75 \quad .75$

$r = 26.\overline{6}$

26 rides

GuidedPractice

3. **FINANCIAL LITERACY** Antoine's class is selling candy to raise money for a class trip. They paid $45 for the candy, and they are selling each candy bar for $1.50. The function $y = 1.50x - 45$ represents their profit y when they sell x candy bars. Find the zero and describe what it means in the context of this situation.

$y = 1.50x - 45$ $\quad x = 30$

↑ profit

$0 = 1.50x - 45$

$+45 \qquad +45$

$\frac{45}{1.5} = \frac{1.5x}{1.5}$

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1-8 55-67 odd