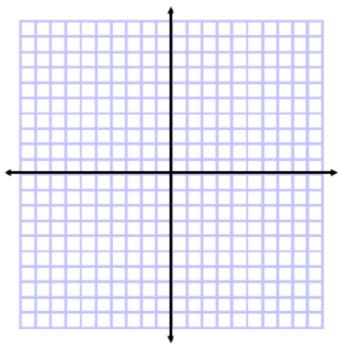
Algebra 1 3.1 Identify linear equations, intercepts, and zeros

Graph linear equations

integer linear equation standard form $A \times + By = C$ constant variable x-intercept (x, b) y-intercept (0, y)

whiteboards

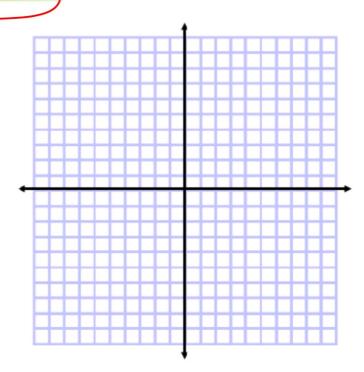


Graph each equation by using the x- and y-intercepts.

4A.
$$-x + 2y = 3$$

4B.
$$y = -x - 5$$

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KeyConcept Standard Form of a Linear Equation

Words The standard form of a linear equation is Ax + By = C,

where $A \ge 0$, A and B are not both zero, and A, B, and C are integers with a greatest common factor of 1.

Examples In 3x + 2y = 5, A = 3, B = 2, and C = 5.

In x = -7, A = 1, B = 0, and C = -7.

- In order
- Integers
- no GCF
- A is positive

Write in Std. form: Identify A,B,C

5) $y = \frac{1}{2} \times + 4$

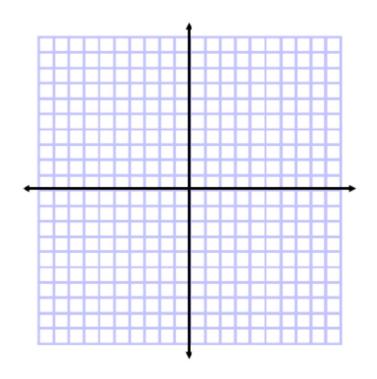
- 5x -8y=17
- 2) 3x+6=2y
- 3) y=-5x+7
- $\frac{4}{}$ -2x-8y=12

(1/2)x + (1/3)y = 5

Example 5 Graph by Making a Table

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

Table of values (TOV)
Choose 4 values for x:
1 pos, 1 neg, zero, cook's choice



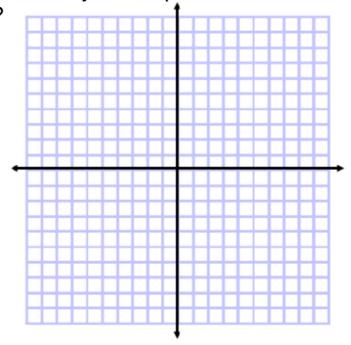
TOV: Solve for y first, OR use x&y intercepts

(Which would be easier?

GuidedPractice

Graph each equation

5A. 2x - y = 2



Special cases:

5B. x = 3

