

# Algebra 1

## Graphing Linear Equations Using Slope-Intercept Form

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Supplies: FCAT Reference Sheet

6th Grade Math	7th Grade Math	8th Grade Math	Algebra 1
<b>Quarter 1</b> 1. 6.1 Solving and Graphing Equations 2. 6.3 Properties of Addition and Multiplication 3. 6.4 Distributive Property 4. 6.5 Slope Formulas to Solve Problems 5. 6.6 Working with Fractions 6. 6.7 Multiplying Fractions and Mixed Numbers 7. 6.8 Dividing Fractions and Mixed Numbers 8. 6.9 Fraction Decimal Equivalency	<b>Quarter 1</b> 1. 7.1 Integers and Absolute Value 2. 7.2 Adding and Subtracting Integers 3. 7.3 Multiplying and Dividing Integers 4. 7.4 The Coordinate Plane 5. 7.5 Operations with Rational Numbers 6. 7.6 Solving Algebraic Expressions with Addition and Subtraction 7. 7.8 Solving Algebraic Expressions with Multiplication and Division 8. 7.9 Solving Two-Step Algebraic Expressions 9. 7.10 Solving Inequalities	<b>Quarter 1</b> 1. 8.1 Solving One-Step Equations 2. 8.2 Solving Equations with Variables on Both Sides 3. 8.3 Solving Equations and Formulas 4. 8.4 Converting Units of Measure 5. 8.5 Solving Linear Equations with Slopes 6. 8.6 Finding the Slope of a Line 7. 8.7 Graphing Linear Equations in Slope-Intercept Form 8. 8.8 Solving Systems of Equations	<b>Quarter 1</b> 1. A.1 Solving and Graphing Equations and Functions 2. A.2 Solving Equations and Inequalities 3. A.3 Representing Functions as Tables and Graphs 4. A.4 Real Numbers 5. A.5 The Distributive Property 6. A.6 Rational and Irrational Numbers 7. A.7 Solving One-Step Equations 8. A.8 Solving Multi-Step Equations, Inequalities, and Systems of Equations 9. A.9 Multi-Step Equations, Inequalities, and Systems of Equations 10. A.10 Rates and Proportions

Overview

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# $y = mx + b$

slope  $\rightarrow$

y Intercept  $\rightarrow$

Graphing Linear Equations Using Slope-Intercept Form

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slope = -1

Slope =  $\frac{\text{Rise}}{\text{Run}}$

x or y Intercept

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Slope = -1

y Intercept = 2

$y = -1x + 2$

Graphing Linear Equations Using Slope-Intercept Form

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Graph  $y = -x - 3$

You Try It!

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$m = -1 = \frac{\text{rise}}{\text{run}} = \frac{-1}{1}$   
 $= \frac{2}{-2}$   
 $y = mx + b$   
 $y = -x - 3$   
 $m = -1$   
 $b = -3$   
 You Try!

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$y = mx + b$   
 What is the equation, in Slope-Intercept Form, of this line?  
 You Try!

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$m = 2$      $b = -1$   
 $y = mx + b$   
 $y = 2x - 1$   
 What is the equation, in Slope-Intercept Form, of this line?  
 You Try!

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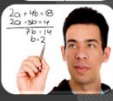
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Find the slope of this line:

$$y = mx + b$$

$$2x - y = 4$$
$$2x - y + y = 4 + y$$
$$2x = 4 + y$$
$$2x - 4 = 4 - 4 + y$$
$$2x - 4 = y \quad \text{slope} = 2$$


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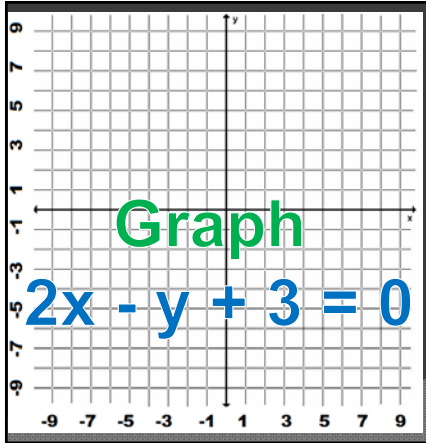
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Graph

$$2x - y + 3 = 0$$


You Try it!

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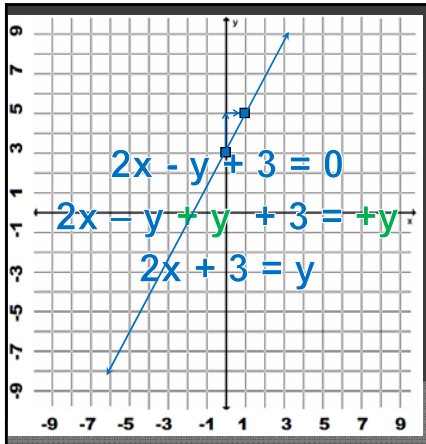

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$$2x - y + 3 = 0$$
$$2x - y + y + 3 = +y$$
$$2x + 3 = y$$


You Try it!

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$y = mx + b$

What are the equations, in Slope-Intercept Form, of these two lines?

You Try it!

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$y = mx + b$

$b = 2$   
 $m = 2/4 = .5$   
 $y = .5x + 2$

$b = -3$   
 $m = 2/4 = .5$   
 $y = .5x - 3$

Parallel Lines have same slope, and never intersect

You Try it!

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