

Algebra 1 Benchmark Toolkit

Algebra 1 Benchmark 1.1

Topic: Real Number Operations

1. $-7+4=$	2. $-3+(-5)=$	3. $-2-7=$	4. $-6-(-4)=$
5. $8(-3)=$	6. $-8(-4)=$	7. $-24\div 6=$	8. $-50\div (-2)=$

Algebra 1 Benchmark 1.2

Topic: Order of Operations

1. Evaluate: $-18\div 9-7+3(5)$	2. Evaluate: $9-2(7-4)^2$
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Algebra 1 Benchmark 4.0

Topic: Simplifying Expressions

1. Simplify: $\frac{-20x+24}{4}$	2. Simplify: $(9h-7k)(-5)$	3. Simplify: $2(-9+5x)+6(x-7)$
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Algebra 1 Benchmark 5.1

Topic: Solving Equations

1. $x-7=9$	2. $\frac{x}{4}+3=5$	3. $-2(x-4)=12$	4. $3(x+2)=2-5x-3$
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Algebra 1 Benchmark 5.2**Topic: Solving Inequalities**

1. $3x - 7x > 20$

2. $2x - 4 \leq -2$

3. $5 - x > 3x + 7$

4. $3(x + 5) \geq -30 + x$

Algebra 1 Benchmark 5.3**Topic: Evaluating Equations and Expressions**1. Evaluate: $3y - x$
when $x = -4$ and $y = -5$ 2. Evaluate: $\frac{7 - 4x}{3x}$ when $x = -2$ 3. Is $x = 3$ a solution for the following inequality? $2(x - 5) \geq -3 + x$ **Algebra 1 Benchmark 5.4****Topic: Solving Word Problems**Write an equation to represent the following statement and then solve it: ***Six less than two times a number is 22.*****Algebra 1 Benchmark 3.0****Topic: Solving Absolute Value Equations**

1. Solve for x : $|x + 4| = 6$

2. Solve for x : $|4 - 2x| < 6$

Algebra 1 Benchmark 7.1**Topic: Interpreting Linear Equations**

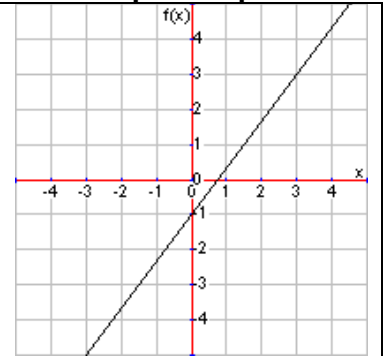
1. Does the point (3, 7) lie on the line defined by:
 $y = 3x - 2$?

2. Does the point (-1, 5) lie on the line defined by:
 $5x + y = -2$?

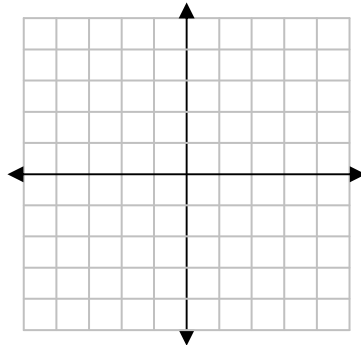
Algebra 1 Benchmark 7.2**Topic: Slope**

1. Find the slope of a line through (-2,1) and (1,-8)

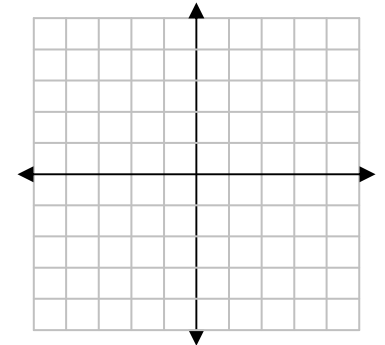
2. Find the slope of the following line:

**Algebra 1 Benchmark 6.1****Topic: Graphing Linear Equations**

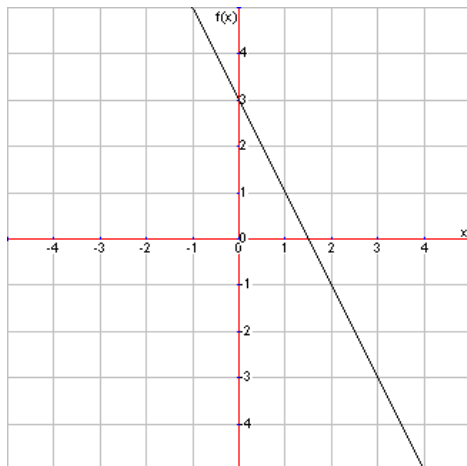
1. Graph the linear equation on the coordinate plane:
 $y = 2x - 3$



2. Graph the linear equation on the coordinate plane:
 $3x - y = 3$

**Algebra 1 Benchmark 6.2****Topic: Deriving & Interpreting Linear Equations**

1. What is the equation of the following graph?



2. What is the slope and y-intercept for the following equations?
 $2x - 3y = 12$

Slope: _____

y-intercept: _____

3. What are the x and y-intercepts of the following linear equation?
 $4y - 6x = 12$

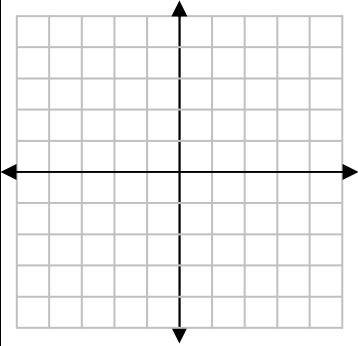
x-intercept: _____

y-intercept: _____

Algebra 1 Benchmark 9.0**Topic: Solving Systems of Linear Equations**

1. What ordered pair is the solution to this system?
(Use graphing)

$$\begin{aligned} 3x + y &= 1 \\ y &= -2x - 1 \end{aligned}$$



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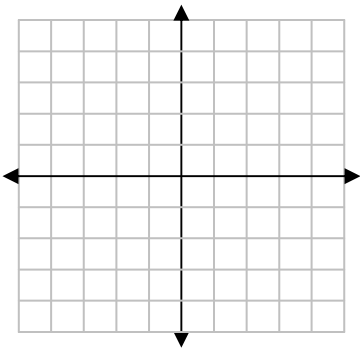
2. What ordered pair is the solution to this system?
(Use substitution)

$$\begin{aligned} y &= -5x + 1 \\ 4x + y &= 3 \end{aligned}$$

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Algebra 1 Benchmark 6.3**Topic: Graphing Linear Inequalities**

1. Graph the linear inequality on the coordinate plane:
 $y > -1$



2. Graph the linear inequality on the coordinate plane:
 $2x - y < 4$

