

Algebra 1 Benchmark Practice

Algebra 1 Benchmark 1.1

Topic: Real Number Operations

1. $-3(-6) =$	2. $-20 \div (-5) =$	3. $-10(3) =$	4. $-7 - (-5) =$
5. $-5 - 12 =$	6. $-2 + 7 =$	7. $24 \div (-8) =$	8. $-4 + (-8) =$

Algebra 1 Benchmark 1.2

Topic: Order of Operations

1. Evaluate: $-12 \div 6 + 7 - 3(7)$	2. Evaluate: $-3 - 2(7 - 11)^2$
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Algebra 1 Benchmark 4.0

Topic: Simplifying Expressions

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

Topic: Solving Equations

1. $x - 3 = 8$	2. $\frac{2}{3}x + 3 = 7$	3. $-5(x - 1) = 6$	4. $2(x - 5) = 2x - 7x - 7$
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Algebra 1 Benchmark 5.2**Topic: Solving Inequalities**

1. $3x - 5x > 30$

2. $3x - 4 \geq 14$

3. $7 - 4x > 2x + 10$

4. $2(x + 5) \leq -3 + x$

Algebra 1 Benchmark 5.3**Topic: Evaluating Equations and Expressions**1. Evaluate: $3y - 8x$
when $x = -4$ and $y = 7$ 2. Evaluate: $\frac{12 + 4x}{-3x}$ when $x = -5$ 3. Is $x = -3$ a solution for the following inequality? $2(x - 1) < -3 + 5x$ **Algebra 1 Benchmark 5.4****Topic: Solving Word Problems**

Write an equation to represent the following statement and then solve it:

Ten less than three times a number is 30.**Algebra 1 Benchmark 3.0****Topic: Solving Absolute Value Equations**

1. Solve for x : $|2x - 5| = 9$

2. Solve for x : $|5 - 3x| > 12$

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

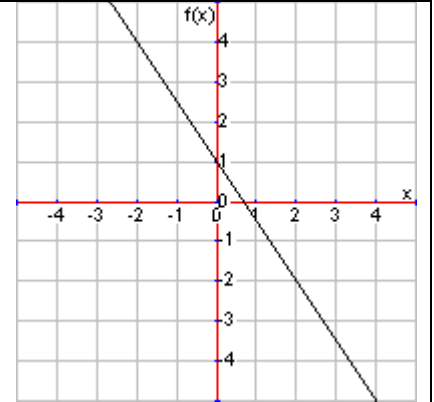
1. Does the point $(-3, 8)$ lie on the line defined by:
 $y = -3x - 5$?

2. Does the point $(-3, -9)$ lie on the line defined by:
 $5x + 3y = 7$?

Algebra 1 Benchmark 7.2**Topic: Slope**

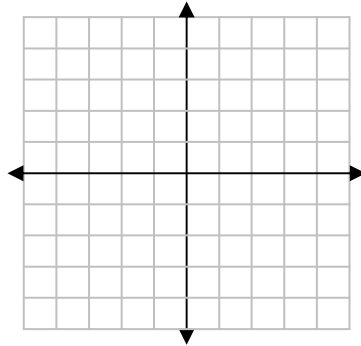
1. Find the slope of a line through $(-8, 1)$ and $(7, -1)$

2. Find the slope of the following line:

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

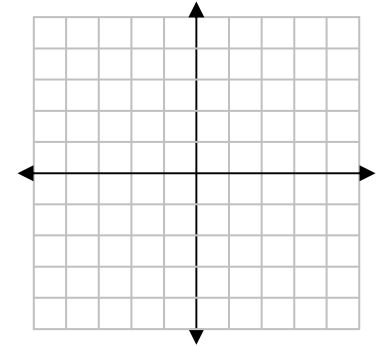
1. Graph the linear equation on the coordinate plane:

$$y = \frac{2}{3}x - 1$$

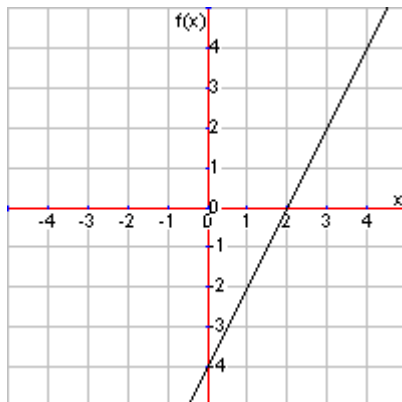


2. Graph the linear equation on the coordinate plane:

$$x - 2y = -6$$

**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?

$$-x + 3y = 9$$

Slope: _____

y-intercept: _____

3. What are the x and y-intercepts of the following linear equation?

$$3x - 4y = -24$$

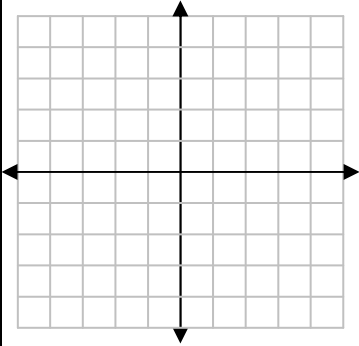
x-intercept: _____

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)

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



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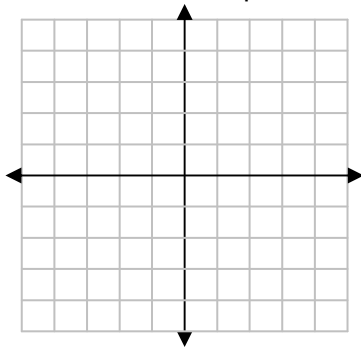
2. What ordered pair is the solution to this system?
(Use substitution)

$$\begin{aligned} y &= -x + 6 \\ 4x - y &= 14 \end{aligned}$$

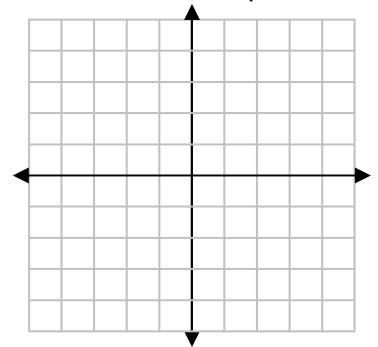
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Algebra 1 Benchmark 6.3**Topic: Graphing Linear Inequalities**

1. Graph the linear inequality on the coordinate plane:
 $y < 3$



2. Graph the linear inequality on the coordinate plane:
 $2x - 3y < -6$



Answers

Benchmark 1.1

- 18
- 4
- 30
- 2
- 17
- 5
- 3
- 12

Benchmark 1.2

- 16
- 35

Benchmark 4.0

- $-5x + 1$
- $6h - 14k$
- $8x - 16$

Benchmark 5.1

- 11
- 6
- $-1/5$
- $3/7$

Benchmark 5.2

- $x < -15$
- $x \geq 6$
- $x < -\frac{1}{2}$
- $x \leq -13$

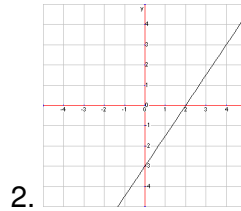
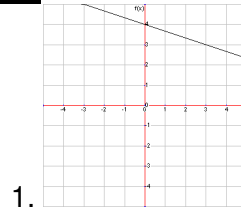
Benchmark 5.3

- 3
- 64
- Yes
- No

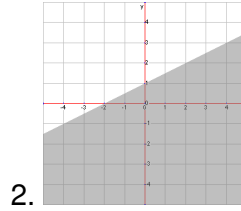
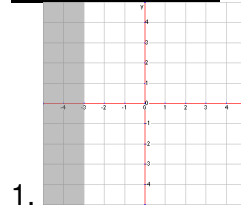
Benchmark 6.1

- $y = -\frac{2}{3}x + 3$
- $m = 5/3$ & $b = 6$
- x-int: (10,0) & y-int: (0,-2)

Benchmark 6.2



Benchmark 6.3



Benchmark 7.0

- No
- $(-2,8), (-1,5), (0,2), (1,-1), (2,-4)$

Benchmark 9.0

- (13,44)
- (14,8)
- (1,-1)

