Daily Math
Week 29 (2013-2014)

Monday, March 17, 2014 1st

Classify $\frac{9}{2}$ as rational or irrational.

Monday, March 17, 2014 1st

Classify $\frac{9}{2}$ as rational or irrational.

Answer: **Rational**

(a ratio of two integers, 9 and 2)

Monday, March 17, 2014 2nd

Classify $\sqrt{5}$ as rational or irrational.

Monday, March 17, 2014 2nd

Classify $\sqrt{5}$ as rational or irrational.

Answer: **Irrational**

(square root of a non-perfect square)

Monday, March 17, 2014 3rd

Find the slope of the line that passes through the points (3,5) and (2,1).

Monday, March 17, 2014 3rd

Find the slope of the line that passes through the points (3,5) and (2,1).

Answer: slope = $\frac{y_2 - y_1}{x_2 - x_1}$

$$\frac{1-5}{2-3} = \frac{-4}{-1} = \mathbf{4}$$

Monday, March 17, 2014

4th

Find the slope of the line that passes through the points shown in the table:

x	2	4	6
y	6	12	18

Monday, March 17, 2014

4^{th}

Find the slope of the line that passes through the points shown in the table:

x	2	4	6
y	6	12	18

Answer: Slope = $\frac{change\ in\ y}{change\ in\ x}$

$$= \frac{12-6}{4-2} = \frac{6}{2} = \mathbf{3}$$

Monday, March 17, 2014

5^{th}

Solve $3x - 2 = 4$.

Monday, March 17, 2014

5th

Solve $3x - 2 = 4$

Answer: $3x - 2 = 4$

$3x - 2 + 2 = 4 + 2$

$3x = 6$

$3x \div 3 = 6 \div 3$

$\boldsymbol{x = 2}$

Monday, March 17, 2014 6^{th}

$-3\frac{1}{2}$ lies between which two integers on the number line?

Monday, March 17, 2014 6^{th}

$-3\frac{1}{2}$ lies between which two integers on the number line?

Answer: $-4 < -3\frac{1}{2} < -3$

Between -4 and -3

Monday, March 17, 2014

7th

$\sqrt{18}$ lies between which two integers on the number line?

Monday, March 17, 2014

7^{th}

$\sqrt{18}$ lies between which two integers on the number line?

Answer: $\sqrt{16} < \sqrt{18} < \sqrt{25}$

$$\mathbf{4 < \sqrt{18} < 5}$$

Tuesday, March 18, 2014 1st

Find the slope of the line that passes through the points: (1, 5) and (2, 8).

Tuesday, March 18, 2014 1st

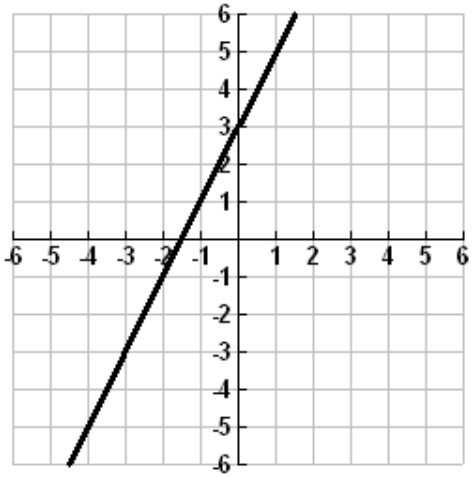
Find the slope of the line that passes through the points: (1, 5) and (2, 8).

Answer: slope = $\frac{y_2 - y_1}{x_2 - x_1}$

$$\frac{8-5}{2-1} = \frac{3}{1} = \mathbf{3}$$

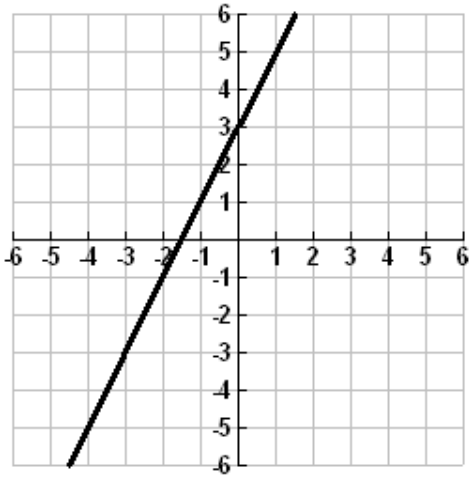
Tuesday, March 18, 2014 2nd

What is the slope of the line shown in the graph?



Tuesday, March 18, 2014 2nd

What is the slope of the line shown in the graph?



Answer: Choose 2 points:

(-2, -1) and (0, 3)

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{3-(-1)}{0-(-2)} = \frac{4}{2} = \mathbf{2}$$

Tuesday, March 18, 2014

3rd

Solve: $2n - 5 = 7$

Answer:

Tuesday, March 18, 2014

3rd

Solve: $2n - 5 = 7$

Answer: $2n - 5 = 7$

$$2n - 5 + 5 = 7 + 5$$

$$2n = 12$$

$$2n \div 2 = 12 \div 2$$

$$\boldsymbol{n = 6}$$

Tuesday, March 18, 2014

4^{th}

Simplify $\sqrt{25}$

Tuesday, March 18, 2014

4^{th}

Simplify $\sqrt{25}$

Answer: **5**

Tuesday, March 18, 2014

5^{th}

Simplify $\sqrt{100}$

Answer:

Tuesday, March 18, 2014

5^{th}

Simplify $\sqrt{100}$

Answer: **10**

Tuesday, March 18, 2014

6th

Find the slope of the line that passes through the points in the table.

x	-2	0	2
y	-1	0	1

Tuesday, March 18, 2014 6^{th}

Find the slope of the line that passes through the points in the table.

x	-2	0	2
y	-1	0	1

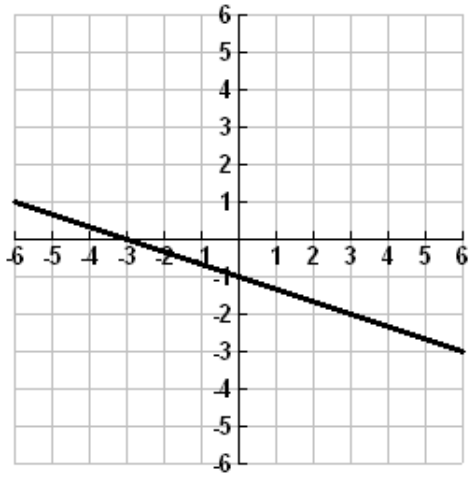
Answer: Slope = $\frac{change\ in\ y}{change\ in\ x}$

$$= \frac{1-0}{2-0} = \frac{1}{2} = \mathbf{\frac{1}{2}}$$

Tuesday, March 18, 2014

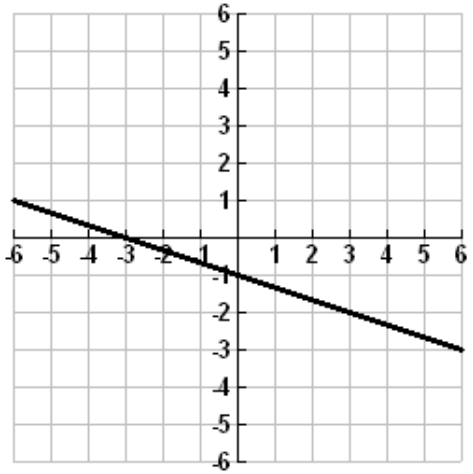
7th

What is the slope of the line shown in the graph?



Tuesday, March 18, 2014 7th

What is the slope of the line shown in the graph?



Answer: Choose 2 points:

(-3, 0) and (3, -2)

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{-2-0}{3-(-3)} = \frac{-2}{6} = -\frac{1}{3}$$

Wednesday, March 19, 2014 1st

Solve $4x + 3 = -1$

Wednesday, March 19, 2014 1st

Solve $4x + 3 = -1$

Answer: $4x + 3 = -1$

$4x + 3 - 3 = -1 - 3$

$4x = -4$

$4x \div 4 = -4 \div 4$

$\boldsymbol{x = -1}$

Wednesday, March 19, 2014 **2nd**

Simplify $6 + 15 \div 3$

Wednesday, March 19, 2014 **2nd**

Simplify $6 + 15 \div 3$

Answer: $6 + 15 \div 3$

$6 + 5 = \mathbf{11}$

Wednesday, March 19, 2014 **3rd**

Simplify $21 \div 7 + 14 \times 2$

Wednesday, March 19, 2014 **3rd**

Simplify $21 \div 7 + 14 \times 2$

Answer: $21 \div 7 + 14 \times 2$

$$3 + 28 = \mathbf{31}$$

Wednesday, March 19, 2014 4th

What is the slope of the line given by the equation, $y = -3x + 2$?

Wednesday, March 19, 2014 4th

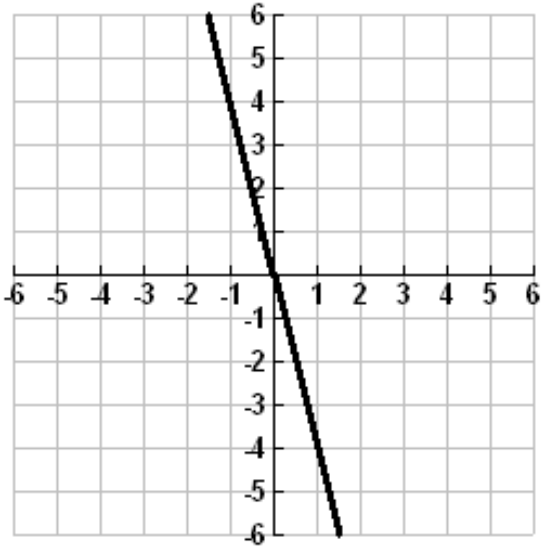
What is the slope of the line given by the equation, $y = -3x + 2$?

Answer: Slope is coefficient of *x*.

Slope = **-3**

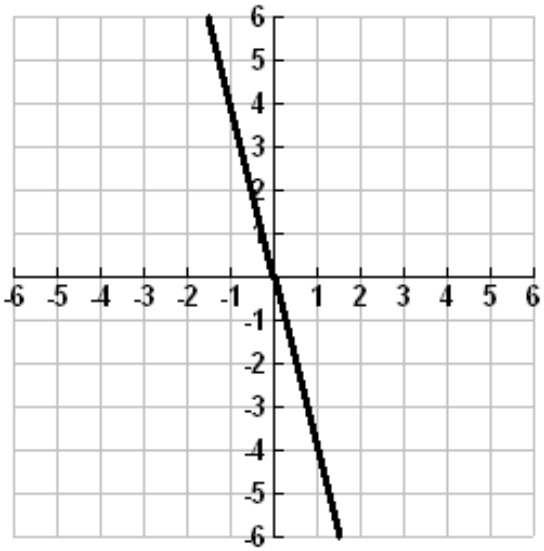
Wednesday, March 19, 2014 5th

What is the slope of the line shown in the graph?



Wednesday, March 19, 2014 5th

What is the slope of the line shown in the graph?



Answer: Choose 2 points:

(-1, 4) and (0, 0)

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{0-4}{0-(-1)} = \frac{-4}{1} = \mathbf{-4}$$

Wednesday, March 19, 2014 6^{th}

Solve $\frac{y}{2} + 5 = -12$

Wednesday, March 19, 2014 6^{th}

Solve $\frac{y}{2} + 5 = -12$

Answer: $\frac{y}{2} + 5 = -12$

$\frac{y}{2} + 5 - 5 = -12 - 5$

$\frac{y}{2} = -17$

$\frac{y}{2} \cdot 2 = -17 \cdot 2$

$y = \mathbf{-34}$

Wednesday, March 19, 2014 7th

Evaluate $2a + 5$ for $a = 5$

Wednesday, March 19, 2014 7th

Evaluate $2a + 5$ for $a = 5$

Answer: $2a + 5$

$2(5) + 5$

$10 + 5 = \mathbf{15}$

Thursday, March 20, 2014 1st

Evaluate $\frac{z}{5} + 2$ for $z = 10$

Thursday, March 20, 2014 1st

Evaluate $\frac{z}{5} + 2$ for $z = 10$

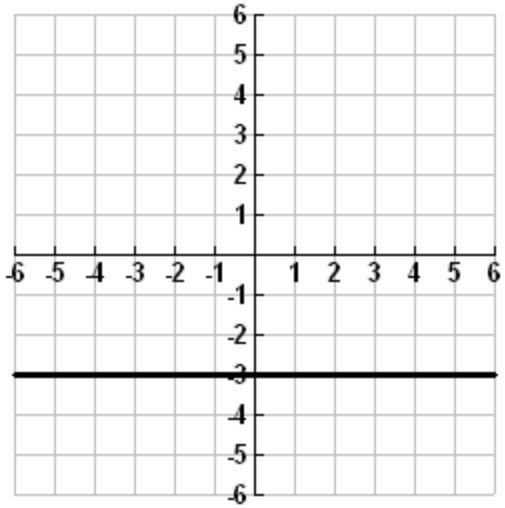
Answer: $\frac{z}{5} + 2$

$\frac{10}{5} + 2$

$2 + 2 = \mathbf{4}$

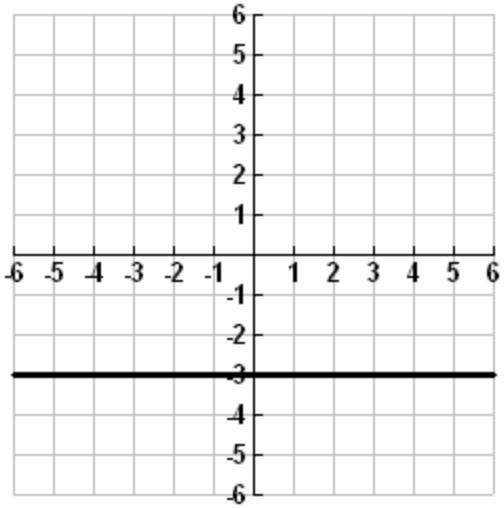
Thursday, March 20, 2014 2nd

What is the slope of the line shown in the graph?



Thursday, March 20, 2014 2nd

What is the slope of the line shown in the graph?



Answer: Horizontal line has

Slope = 0

Thursday, March 20, 2014 3rd

What is the slope of the line given by the equation $x = -5$?

Thursday, March 20, 2014 3rd

What is the slope of the line given by the equation $x = -5$?

Answer: It is a vertical line. It has an **undefined slope**.

Thursday, March 20, 2014 4th

Find the length of the hypotenuse of a right triangle if the legs measure 5 cm and 12 cm. Round to the nearest tenth, if necessary.

Thursday, March 20, 2014 4th

Find the length of the hypotenuse of a right triangle if the legs measure 5 cm and 12 cm. Round to the nearest tenth, if necessary.

Answer: $5^2 + 12^2 = h^2$

$25 + 144 = h^2$

$169 = h^2$

$\sqrt{169} = \boldsymbol{h = 13\ \text{cm}}$

Thursday, March 20, 2014 5th

Solve $3b + 7 = -2$

Thursday, March 20, 2014 5th

Solve $3b + 7 = -2$

Answer: $3b + 7 = -2$

$3b + 7 - 7 = -2 - 7$

$3b = -9$

$3b \div 3 = -9 \div 3$

$\boldsymbol{b = -3}$

Thursday, March 20, 2014 6th

Find the length of a leg of a right triangle if one leg measures 7 in. and the hypotenuse measures 12 in. Round to the nearest tenth, if necessary.

Thursday, March 20, 2014 6th

Find the length of a leg of a right triangle if one leg measures 7 in. and the hypotenuse measures 12 in. Round to the nearest tenth, if necessary.

Answer: $7^2 + x^2 = 12^2$

$49 + x^2 = 144$

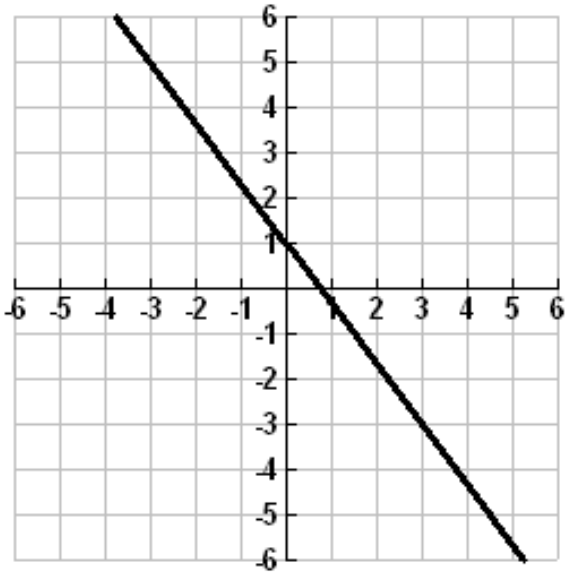
$49 - 49 + x^2 = 144 - 49$

$x^2 = 95$

$x = \sqrt{95} \approx \mathbf{9.7}$

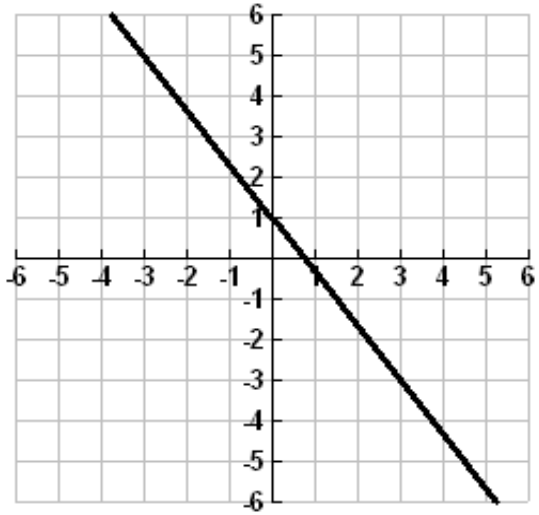
Thursday, March 20, 2014 7th

What is the slope of the line shown in the graph?



Thursday, March 20, 2014 7th

What is the slope of the line shown in the graph?



Answer: Choose 2 points:

(-3, 5) and (3, -3)

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{-3-5}{3-(-3)} = \frac{-8}{6} = -\frac{4}{3}$$

Friday, March 21, 2014 1st

What is the slope of the line that passes through the following points:

(5, 2) (10, 5) (15, 8)?

Friday, March 21, 2014 1st

What is the slope of the line that passes through the following points: (5, 2) (10, 5) (15, 8)?

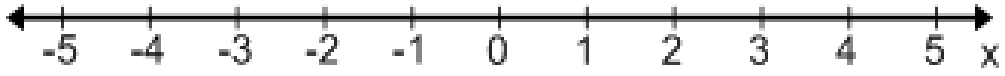
Answer: slope = $\frac{y_2 - y_1}{x_2 - x_1}$

$$\frac{5-2}{10-5} = \frac{\mathbf{3}}{\mathbf{5}}$$

Friday, March 21, 2014 2nd

Place the following numbers on the number line below:

$$A(3\frac{1}{2});\ B(2\frac{1}{4});\ C(0);\ D(\frac{7}{4})$$

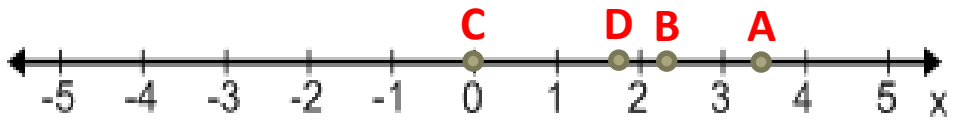


Friday, March 21, 2014 2nd

Place the following numbers on the number line below:

$$A(3\frac{1}{2});\ B(2\frac{1}{4});\ C(0);\ D(\frac{7}{4})$$

Answer:



Friday, March 21, 2014 3rd

Solve $\frac{m}{3} + (-3) = 12$

Friday, March 21, 2014 3rd

Solve $\frac{m}{3} + (-3) = 12$

Answer: $\frac{m}{3} + (-3) = 12$

$\frac{m}{3} + (-3) + 3 = 12 + 3$

$\frac{m}{3} \cdot 3 = 15 \cdot 3$

$\boldsymbol{m = 45}$

Friday, March 21, 2014 4th

Solve $\frac{c}{-4} + 8 = -6$

Friday, March 21, 2014 4th

Solve $\frac{c}{-4} + 8 = -6$

Answer: $\frac{c}{-4} + 8 = -6$

$\frac{c}{-4} + 8 - 8 = -6 - 8$

$\frac{c}{-4} = -14$

$\frac{c}{-4} \cdot (-4) = -14 \cdot (-4)$

$\boldsymbol{c = 56}$

Friday, March 21, 2014 5th

What is the slope of the line given by the equation $y = x + 2$?

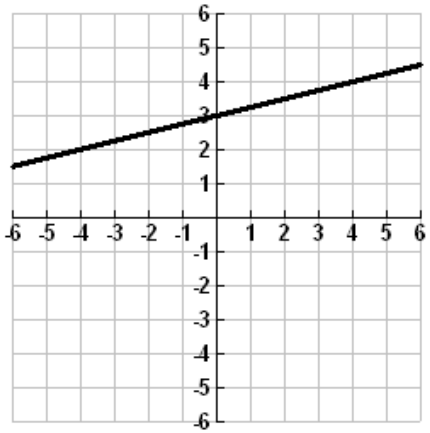
Friday, March 21, 2014 5th

What is the slope of the line given by the equation $y = x + 2$?

Answer: Slope = **1**

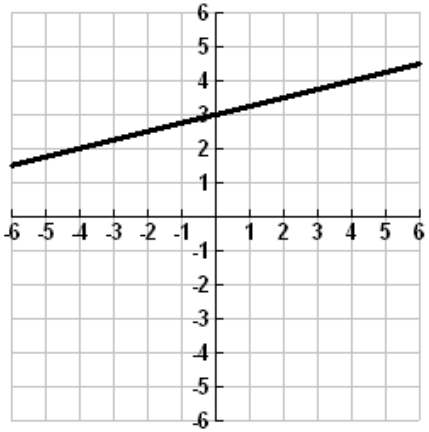
Friday, March 21, 2014 6th

What is the slope of the line shown in the graph?



Friday, March 21, 2014 6th

What is the slope of the line shown in the graph?



Answer: Choose 2 points:

(-4, 2) and (4, 4)

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{4-2}{4-(-4)} = \frac{2}{8} = \frac{\mathbf{1}}{\mathbf{4}}$$

Friday, March 21, 2014 7th

Put the following numbers in order from least to greatest:

$$A(3\frac{1}{2});\ B(-2\frac{1}{4});\ C(0);\ D(\frac{7}{4})$$

Friday, March 21, 2014 7th

Put the following numbers in order from least to greatest:

$$A(3\frac{1}{2});\ B(-2\frac{1}{4});\ C(0);\ D(\frac{7}{4})$$

Answer: **B, C, D, A**