

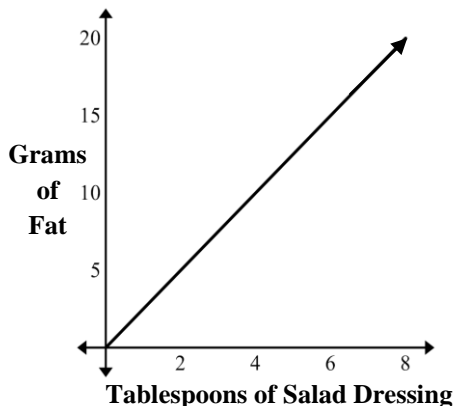
Slope, Midpoint, Distance

Long-Term Memory Review – Grade 8

Review 1

- The midpoint of two ordered pairs is defined as the _____ of the x -coordinates and the y -coordinates.
- What is the midpoint of the line segment with endpoints at $(-5, 2)$ and $(1, -2)$?
 - $(-6, 4)$
 - $(-4, 0)$
 - $(-3, 2)$
 - $(-2, 0)$
- The ordered pairs for two points are given as (x_1, y_1) and (x_2, y_2) . The distance d between the two points is found by using the formula $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$. Find the distance d between the given points.
 - $(7, 3)$ and $(2, 3)$
 - $(7, 2)$ and $(7, 8)$

- The graph below shows the number of grams of fat in different amounts of a salad dressing.



The slope of the line is $\frac{5}{2}$. Which of the following statements best describes the meaning of this slope?

- There are $\frac{5}{2}$ grams of fat in 1 tablespoon of salad dressing.
 - There are 2 grams of fat in 5 tablespoons of salad dressing.
 - There are 5 grams of fat in 5 tablespoons of salad dressing.
 - There are 5 grams of fat in 2 tablespoons of salad dressing.
- _____ is defined as the difference in the y -coordinates divided by the difference in the _____-coordinates.

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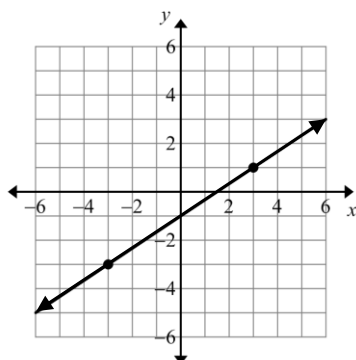
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Review 2

1. Vertical change over horizontal change is defined as _____.

2. Vertical change is defined as the difference in the _____-coordinates.

3. Using the graph below, count the vertical change and the horizontal change. Then put them in slope form.



Vertical Change = _____

Horizontal Change = _____

Slope = _____

4. The steepest part of a walking trail in Craters of the Moon National Monument rises 9 yards vertically for every 50 yards traveled horizontally. One particular part of the trail covers a horizontal distance of 25 yards. How many yards of a vertical rise will there be?

A. 4.5 yards

B. 9 yards

C. 12.5 yards

D. 18 yards

5. Use the formula to find the distance between the given points. $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

a) (2,3) and (5,7)

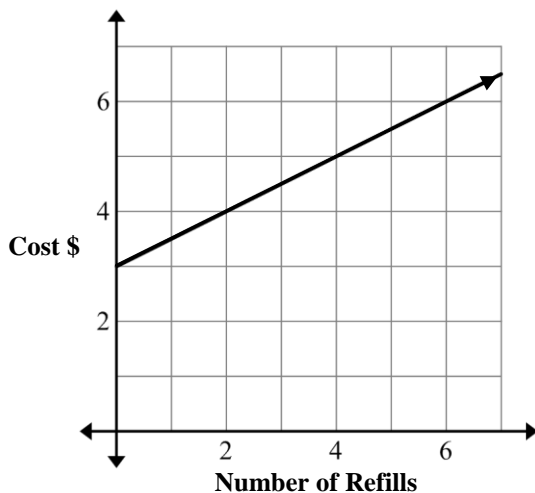
b) (4,6) and (10,14)

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Review 3

- Horizontal change is defined as the difference in the _____-coordinates.
- The graph below represents the cost of buying an insulated cup and different numbers of refills of soda at a convenience store. The slope of the line represents the cost per refill.



What is the cost per refill?

- A. \$0.25 B. \$0.50 C. \$2.00 D. \$4.00
- What is the slope of a line that passes through the points (a,b) and (c,b) ?

A. b B. $c-a$ C. 0 D. undefined
 - The midpoint of two ordered pairs is defined as the _____ of the x -coordinates and the y -coordinates.
 - Two points on a line are given by the ordered pairs $(-6,2)$ and $(8,9)$. Which ordered pair is located halfway between the two points?

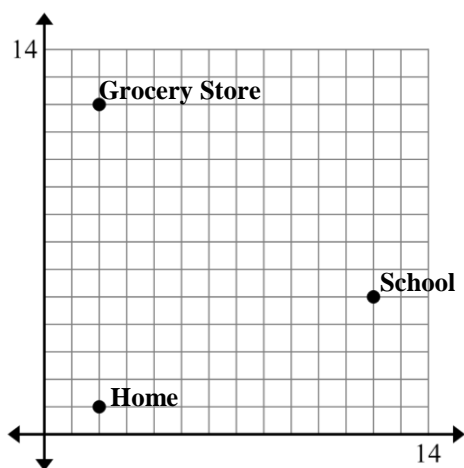
A. $(-7,-3.5)$ B. $(1,5.5)$ C. $(2,11)$ D. $(14,7)$

Slope, Midpoint, Distance

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Review 4

- _____ is defined as the difference in the _____-coordinates divided by the difference in the _____-coordinates.
- What is the slope of a line that passes through the points (a,b) and (a,c) ?
 - $b-a$
 - $c-a$
 - 0
 - undefined
- Katie drew the scale map shown below, which shows the location of her home, her school and the grocery store. Which point is exactly halfway between her school and the grocery store?



- $(5,3.5)$
 - $(10,7)$
 - $(7,8.5)$
 - $(12,5)$
- What is the slope of a line that passes through the points $(5,4)$ and $(9,7)$?
 - undefined
 - 0
 - $\frac{4}{3}$
 - $\frac{3}{4}$
 - Use the formula to find the distance between the given points. $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
 - $(2,4)$ and $(11,16)$
 - $(-3,-7)$ and $(6,5)$

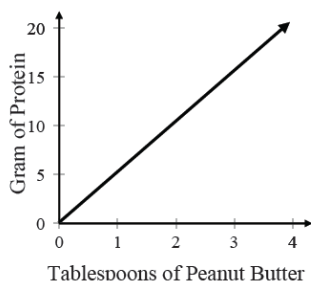
Slope, Midpoint, Distance

Long-Term Memory Review – Grade 8

Quiz

- Horizontal change is defined as the difference in the _____-coordinates.
- The graph below shows the number of grams of protein in different amounts of peanut butter.

The slope of the line is $\frac{5}{1}$. Which of the following statements best describes the meaning of this slope?



- There are $\frac{1}{5}$ grams of protein in 1 tablespoon of peanut butter.
 - There is 1 gram of protein in 5 tablespoons of peanut butter.
 - There are 5 grams of protein in 5 tablespoons of peanut butter.
 - There are 5 grams of protein in 1 tablespoon of peanut butter.
- What is the midpoint of the line segment with endpoints $(-5,2)$ and $(1,-2)$?
 - $(-6,4)$
 - $(-4,0)$
 - $(-3,2)$
 - $(-2,0)$
 - What is the slope of a line that passes through the points $(8,4)$ and $(11,9)$?
 - undefined
 - 0
 - $\frac{5}{3}$
 - $\frac{3}{5}$
 - Use the formula to find the distance between the given points. $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
 - $(1,-5)$ and $(13,11)$
 - $(-2,5)$ and $(4,-3)$

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Answers

Review 1- Answers

- 1) average or mean
- 2) D
- 3) a) 5 b) 6
- 4) D
- 5) slope; x

Review 2- Answers

- 1) slope
- 2) y
- 3) Vertical Change = 4; Horizontal Change = 6; Slope = $\frac{2}{3}$
- 4) A
- 5) a) 5 b) 10

Review 3- Answers

- 1) x
- 2) B
- 3) C
- 4) average or mean
- 5) B

Review 4- Answers

- 1) slope; y ; x
- 2) D
- 3) C
- 4) D
- 5) a) 15 b) 15

Quiz - Answers

- 1) x
- 2) D
- 3) D
- 4) C
- 5) a) 20 b) 10