Name: Date: Period:

1.   What is the y-intercept for the graph of the equation 3x – 5y = 15? (Hint: y = mx + b)

[A]   -5   [B]   -3   [C]   3   [D]   5
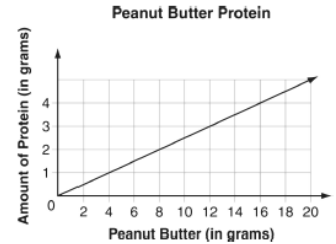
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2.   Which of the following describes the slope of a HORIZONTAL line on the coordinate plane?
[A]   Zero   [B]   Positive   [C]   Negative   [D]   undefined

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3.   According to the graph, how many grams of protein are in each gram of peanut butter?

[A] $\frac{1}{4}$ [C] $\frac{2}{1}$

[B] $\frac{3}{4}$ [D] $\frac{4}{1}$

Peanut Butter Protein

Amount of Protein (in grams)

Peanut Butter (in grams)

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4.   The roof of a house rises 4 feet VERTICALLY for every 3 feet it runs HORIZONTALLY. The ceiling inside the house is parallel to the roof. What is the slope of the ceiling?

[A] $\frac{3}{7}$ [B] $\frac{3}{4}$ [C] $\frac{4}{3}$ [D] $\frac{7}{4}$
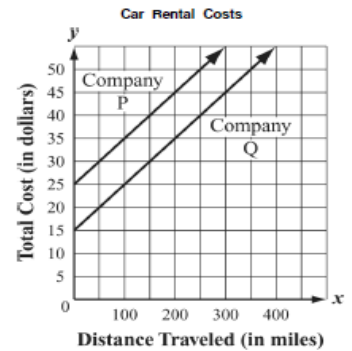
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5.   Mary compared the slope of the function y = 5x + 6 to the slope of the function whose graph passes through all the points (x, y) given in the table shown. What is the difference between the slopes of the functions?

x	y
1	3
2	6
3	9
4	12

[A]   2   [C]   6
[B]   5   [D]   8

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6.   Two car rental companies charge a one-time fee and a mileage rate for renting a car. The graph compares the costs for renting cars from the two companies. Based on the graph, which of the following statements appears to be true about the costs of renting cars from the two companies?

[A]   The one-time fee at both companies is the same.

[B]   The mileage rate at both companies is the same.

[C]   Company P charges a lower one-time fee than Company Q.

[D]   Company Q charges a lower mileage rate than Company P.

Car Rental Costs

Total Cost (in dollars)

Distance Traveled (in miles)

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7.   Which of the following graphs shows a constant rate of change?

[A]   [B]   [C]   [D]

Rate of Change Practice WS3 (PA)

8. The total cost in dollars, y, of a membership at each of four health clubs is represented below in terms of x, the number of months of the membership. Which representation has the greatest rate of change?
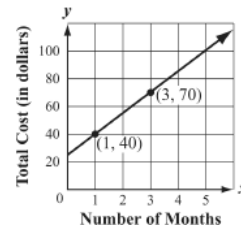
[A]   Health Club A   [B]   Health Club B   [C]   Health Club C   [D]   Health Club D
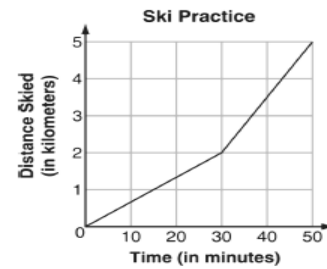
y = 12x + 60

x	y
0	$0
1	$21
2	$42
3	$63
4	$84

A customer pays a one-time fee of $20 plus $20 each month for x months.

9. The graph shows the distance Ben skied during a 50-minute practice. How does Ben's speed during the last 20 minutes of the practice compare with his speed during the first 30 minutes? Explain your answer.
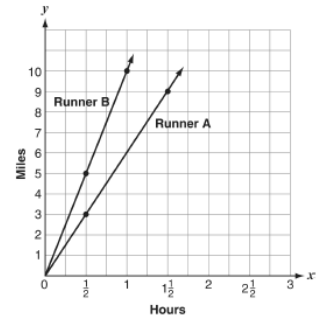

10. The graph shows the distance, as a function of time for two runners. Which runner was faster, and by how much?

[A]   Runner A, by 2 miles per hour   [C]   Runner A, by 4 miles per hour

[B]   Runner B, by 2 miles per hour   [D]   Runner B, by 4 miles per hour
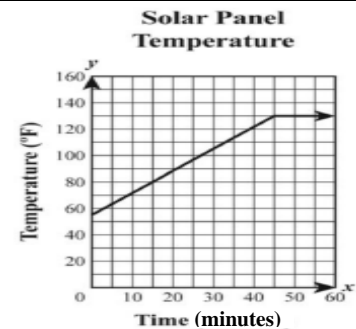

11. Tanya had solar panels installed on her house. The graph shows the change in temperature of the solar panels over time. What is the rate of change in the temperature, in °F per second, during the FIRST 45 minutes?

[A] $\frac{5}{3}$ [C] $\frac{4}{5}$

[B] $\frac{5}{4}$ [D] $\frac{3}{5}$
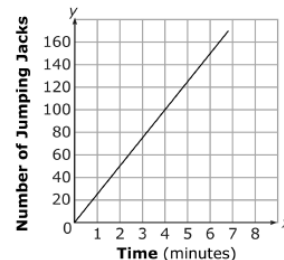

12. Alicia and Melissa did jumping jacks. The table shows the number of jumping jacks that Alicia had done in different amounts of time. The graph shows the number of jumping jacks Melissa had done in different amounts of time. Which choice best describes the difference between the rates at which the girls did jumping jacks?

Alicia

Time	1	2	3	4	5	6	7	8
JJ	30	60	90	120	150	180	210	240

[A]   Melissa did 6 more JJ per minute than Alicia

[B]   Alicia did 6 more JJ per minute than Melissa

[C]   Melissa did 5 more JJ per minute than Alicia

[D]   Alicia did 5 more JJ per minute than Melissa

Rate of Change Practice WS3 (PA)