

Linear and Exponential Functions Day Four: Reading and Writing Equations

Questions 1-4

1. What is the equation of the line that passes through the point $(3, -7)$ and has a slope of $-\frac{4}{3}$?

1) $y = -\frac{4}{3}x + 3$

2) $y = -\frac{4}{3}x - 3$

3) $y = \frac{37}{3}x - \frac{4}{3}$

4) $y = -\frac{59}{9}x - \frac{4}{3}$

3. A line having a slope of $\frac{3}{4}$ passes through the point $(-8, 4)$. Write the equation of this line in slope-intercept form.

2. If point $(-1, 0)$ is on the line whose equation is $y = 2x + b$, what is the value of b ?

1) 1

2) 2

3) 3

4) 0

4. What is an equation of the line that passes through the points $(2, 1)$ and $(6, -5)$?

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

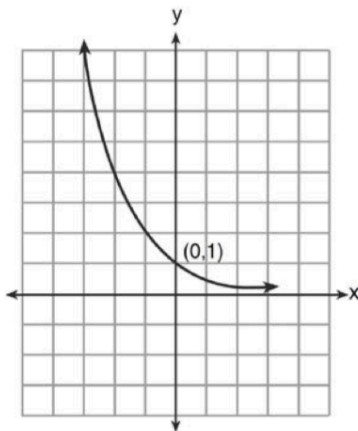
2) $y = -\frac{3}{2}x + 4$

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

4) $y = -\frac{2}{3}x + \frac{7}{3}$

Questions 5-6

5. What is the equation of the graph shown below?



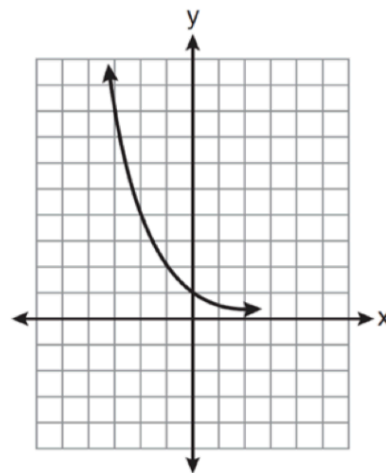
1) $y = 2^x$

2) $y = 2^{-x}$

3) $x = 2^y$

4) $x = 2^{-y}$

6. Which equation is represented by the graph below?



1) $y = 5^x$

2) $y = 0.5^x$

3) $y = 5^{-x}$

4) $y = 0.5^{-x}$

Questions 7-8

7.

What is an equation of the line that passes through the points (1,3) and (8,5)?

- 1) $y + 1 = \frac{2}{7}(x + 3)$
- 2) $y - 5 = \frac{2}{7}(x - 8)$
- 3) $y - 1 = \frac{2}{7}(x + 3)$
- 4) $y + 5 = \frac{2}{7}(x - 8)$

8.

How many of the equations listed below represent the line passing through the points (2,3) and (4,-7)?

$$5x + y = 13$$

$$y + 7 = -5(x - 4)$$

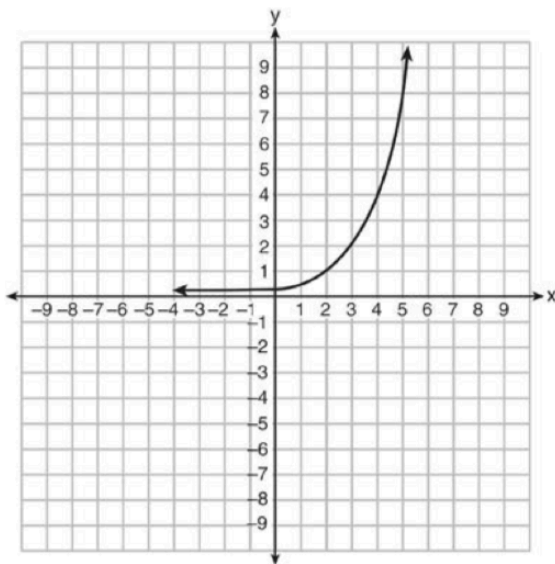
$$y = -5x + 13$$

$$y - 7 = 5(x - 4)$$

- 1) 1
- 2) 2
- 3) 3
- 4) 4

Question 9

Write an exponential equation for the graph shown below.



Explain how you determined the equation.

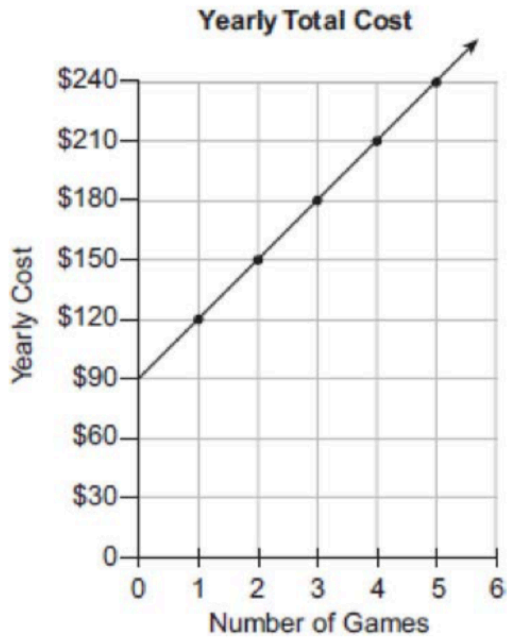
Question 10

Write an equation that represents the line that passes through the points (5,4) and (-5,0).

Questions 15-16

15.

The accompanying graph represents the yearly cost of playing 0 to 5 games of golf at the Shadybrook Golf Course. What is the total cost of joining the club and playing 10 games during the year?



16.

The graph of a linear equation contains the points $(3, 11)$ and $(-2, 1)$. Which point also lies on the graph?

- 1) $(2, 1)$
- 2) $(2, 4)$
- 3) $(2, 6)$
- 4) $(2, 9)$