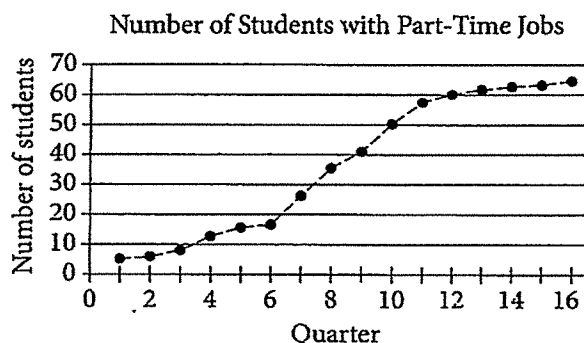




1

A high school counselor conducted a study over 16 consecutive quarters to determine the number of students with part-time jobs. Each student in the 2014 graduating class is surveyed once per quarter for all four years of high school. The graph below shows the data for each quarter the survey was conducted.



During which of the following periods is the increase in the number of students with part-time jobs largest?

- A) Quarters 4 through 6
- B) Quarters 7 through 10
- C) Quarters 11 through 14
- D) Quarters 13 through 16

2

Eli saves money each month to buy a new computer. The total amount he has saved, T , can be calculated by the equation $T = 83 + 30m$, where m is the number of months since he started saving. What does the number 83 represent in the equation?

- A) The amount of money Eli started with
- B) The number of months Eli has been saving
- C) The amount of money Eli saves each month
- D) The total amount of money Eli wants to save

3

According to the Department of Agriculture, consuming 100 grams of banana provides 0.15 milligram of zinc. Which of the following is closest to the number of milligrams of zinc provided by 140 grams of banana?

- A) 0.15
- B) 0.21
- C) 0.25
- D) 0.93

4

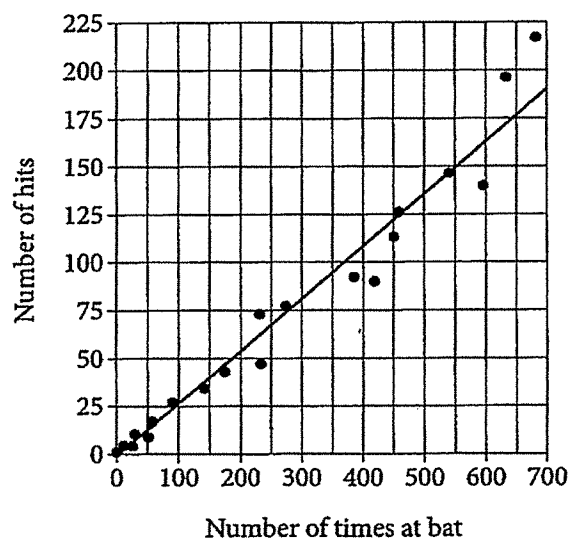
When the equation $y = 5x + p$, where p is a constant, is graphed in the xy -plane, the line passes through the point $(-2, 1)$. What is the value of p ?

- A) -9
- B) -2
- C) 3
- D) 11



Questions 5 and 6 refer to the following information.

*The Number of Hits
and Times at Bat by Players on
a Major League Baseball Team*



The scatterplot above shows the number of hits and the number of times at bat by each of 20 players on a major league baseball team. The line of best fit for the data is also shown.

5

Which of the following statements about the relationship between the number of times at bat and the number of hits is true?

- A) As the number of times at bat increases, the number of hits decreases.
- B) As the number of times at bat increases, the number of hits increases.
- C) As the number of times at bat increases, the number of hits remains constant.
- D) As the number of times at bat decreases, the number of hits increases.

6

For the player with 450 times at bat, the actual number of hits the player had is approximately how many fewer than the number of hits predicted by the line of best fit?

- A) 10
- B) 20
- C) 30
- D) 40



7

An advertisement states that the printing rate of a certain printer is 400 characters per second. According to the convention that 1 word consists of 5 characters, what would be the advertised printing rate, in words per minute?

- A) 2,000
- B) 4,800
- C) 24,000
- D) 120,000

8

Year	0	1	2	3	4
Salary	38,000	39,140	40,314	41,524	42,769

The table above shows the yearly salary, in dollars, of an employee at a company. Which of the following best describes the type of model that fits the data in the table?

- A) Linear, increasing by approximately \$1,140 per year
- B) Linear, increasing by approximately \$1,245 per year
- C) Exponential, increasing by approximately 3% each year
- D) Exponential, increasing by approximately 9% each year

9

$$(x^2y - 3y^2 + 5xy^2) - (-x^2y + 3xy^2 - 3y^2)$$

Which of the following is equivalent to the expression above?

- A) $2x^2y + 2xy^2$
- B) $8xy^2 - 6y^2$
- C) $2x^2y + 8xy^2 - 6y^2$
- D) $x^4y^2 + 9xy^4 - 15xy^2$

10

$$4x - \frac{1}{2}x - 7 = 7\left(\frac{1}{2}x - 7\right)$$

Which of the following describes the solution to the equation above?

- A) $x = 0$
- B) $x = 10\frac{1}{2}$
- C) The equation has infinitely many solutions.
- D) The equation has no solutions.

Bellwork

WED, JAN 8, 2020

ANSWERS

1. B

2. A

3. B

4. D

5. B

6. A

7. B

8. C

9. A

10. D