

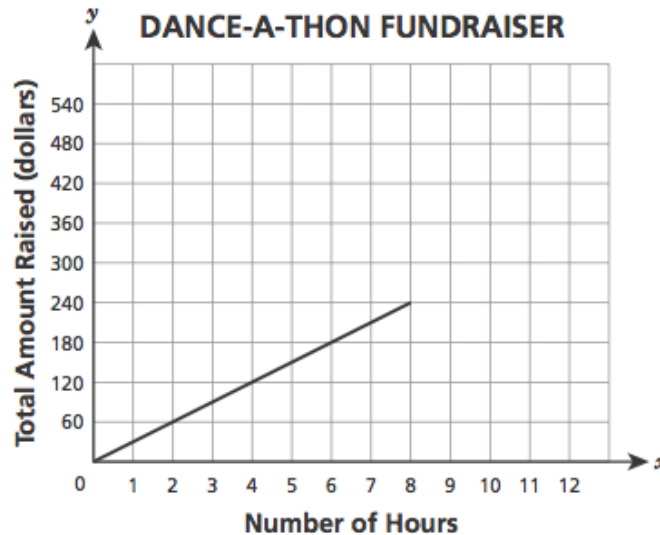
Topic No. 04



#1

Question 1

Students organized a 12-hour “dance-a-thon” as a fundraiser for their summer camp. The graph below represents the amount of money they raised during the first 8 hours.



What was the amount of money raised per hour during the first 8 hours?
Show your work or explain how you determined your answer.

Answer \$ _____ per hour

During the next 4 hours of the dance-a-thon, the students raised money at twice the hourly rate of the first 8 hours.

On the coordinate plane on the previous page, complete the graph for the next 4 hours to represent the total amount of money raised at the dance-a-thon. Use words and numbers on the following lines to explain how you knew where to draw the graph.

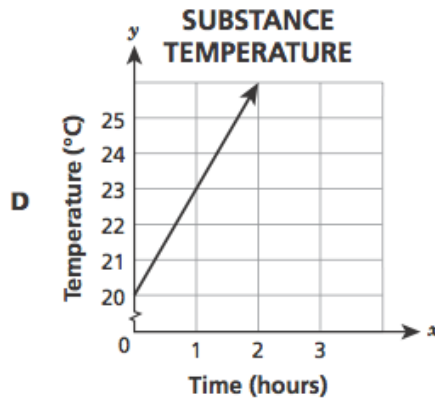
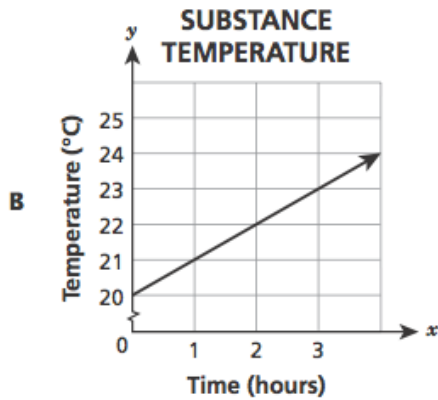
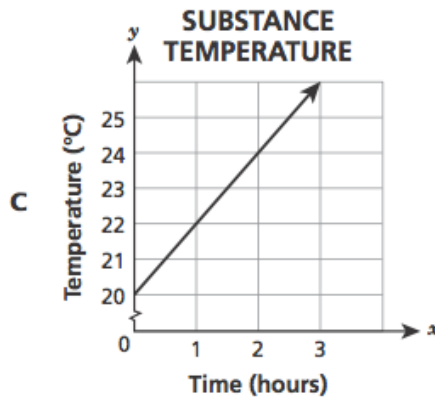
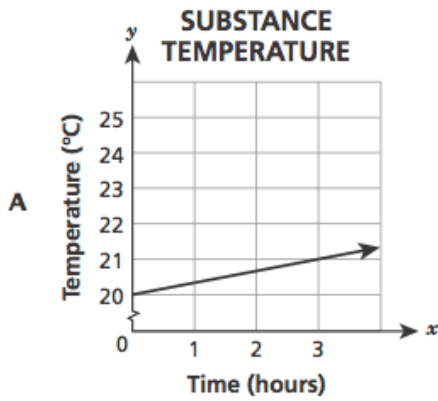
Topic No. 04



#1

Question 2

During an experiment, the temperature of a substance increased at a constant rate of three degrees Celsius ($^{\circ}\text{C}$) per hour. Which graph represents this relationship?



Topic No. 04



#1

Question 3

Annette plans to visit an amusement park where she must pay for admission and purchase tickets to go on the rides. Annette wants to find the total cost for a day at the amusement park. She wrote the equation $c = 1.50x + 12$ to predict c , the total cost for a day at the amusement park. What could the number 12 represent in Annette's equation?

- A the number of rides
- B the cost of admission
- C the cost of each ticket
- D the number of tickets

Question 4

The winning time for the men's 400-meter race in each of the Olympic Games from 1976 to 1996 can be modeled by the equation $y = -0.054x + 44.54$, where x is the number of years after 1976 and y is the winning time in seconds. If the relationship continues, which equation could be used to predict the winning time in the year 2020?

- A. $y = -0.054(1976) + 44.54$
- B. $y = -0.054(2020) + 44.54$
- C. $y = -0.054(24) + 44.54$
- D. $y = -0.054(44) + 44.54$

Topic No. 04



#1

Question 5

The table below shows the cost of different numbers of goldfish at a pet store.

COST OF GOLDFISH

Number of Goldfish	Cost
5	\$1.50
10	\$3.00
15	\$4.50
20	\$6.00

The cost is a linear function of the number of goldfish. Which statement describes the rate of change of this function?

- A** The cost increases \$0.30 each time 1 goldfish is added.
- B** The cost increases \$1.50 each time 1 goldfish is added.
- C** The cost increases \$3.00 each time 5 goldfish are added.
- D** The cost increases \$6.00 each time 5 goldfish are added.

Question 6

The cost to rent a paddleboat at the city park includes an initial fee of \$7.00, plus \$3.50 per hour. Which equation models the relationship between the total cost, y , and the number of hours, x , that the paddleboat is rented?

- A** $y = 3.5x + 7$
- B** $y = 7x + 3.5$
- C** $y = \frac{x}{7} + 3.5$
- D** $y = \frac{x}{3.5} + 7$

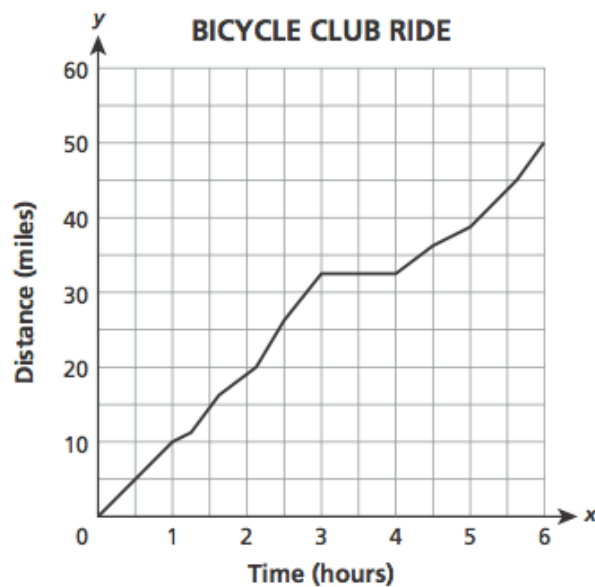
Topic No. 04



#1

Question 7

A bicycle club went on a six-hour ride. The graph below shows the relationship between the number of hours spent on the trails and the number of miles traveled.



Which statement best interprets information provided by the graph?

- A The club members rode at a constant speed for the entire ride.
- B The club members stopped for a rest during their ride.
- C The number of miles traveled increased continuously throughout the ride.
- D The number of miles traveled increased some of the time and decreased some of the time.