Algebra 1 Quick-Quiz-03252025

Question 1.

Which value of p is the solution of $5p - 1 = 2p + 20$?

(1) $\frac{19}{7}$ (3) 3

(2) $\frac{19}{3}$ (4) 7

Question 2

Given the graph of the line represented by the equation $f(x) = -2x + b$, if b is increased by 4 units, the graph of the new line would be shifted 4 units

(1) right (3) left

(2) up (4) down

Question 3. Use your graphing software to check your answer.

Rowan has $50 in a savings jar and is putting in $5 every week. Jonah has $10 in his own jar and is putting in $15 every week. Each of them plots his progress on a graph with time on the horizontal axis and amount in the jar on the vertical axis. Which statement about their graphs is true?

(1) Rowan's graph has a steeper slope than Jonah's.

(2) Rowan's graph always lies above Jonah's.

(3) Jonah's graph has a steeper slope than Rowan's.

(4) Jonah's graph always lies above Rowan's.

Question 4.

To watch a varsity basketball game, spectators must buy a ticket at the door. The cost of an adult ticket is $3.00 and the cost of a student ticket is $1.50. If the number of adult tickets sold is represented by a and student tickets sold by s, which expression represents the amount of money collected at the door from the ticket sales?

(1) $4.50as$ (3) $(3.00a)(1.50s)$

(2) $4.50(a + s)$ (4) $3.00a + 1.50s$

Question 5.

Mrs. Smith wrote "Eight less than three times a number is greater than fifteen" on the board. If x represents the number, which inequality is a correct translation of this statement?

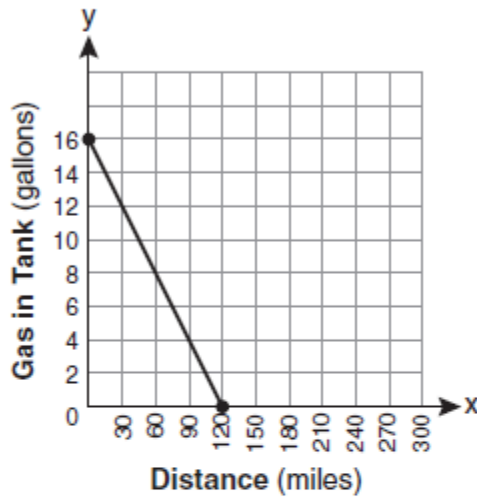(1) $3x - 8 > 15$ (3) $8 - 3x > 15$

(2) $3x - 8 < 15$ (4) $8 - 3x < 15$

Question 6.

Which value of x is in the solution set of the inequality $-4x + 2 > 10$?

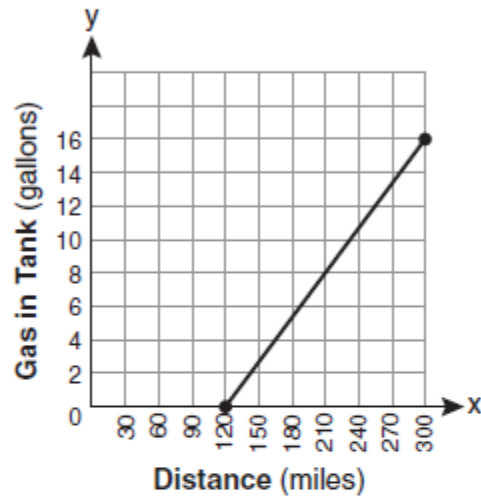(1) -2 (3) 3

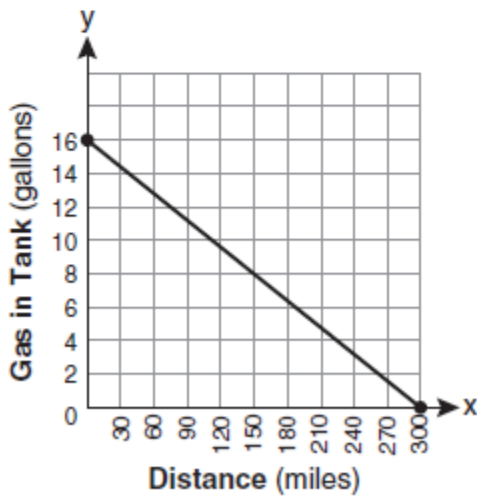(2) 2 (4) -4

Question 7.

7 The gas tank in a car holds a total of 16 gallons of gas. The car travels 75 miles on 4 gallons of gas. If the gas tank is full at the beginning of a trip, which graph represents the rate of change in the amount of gas in the tank?
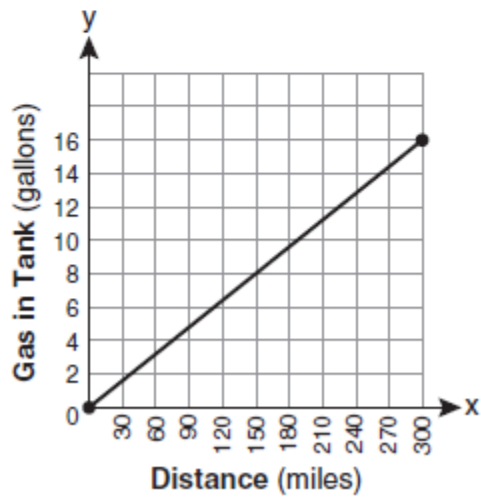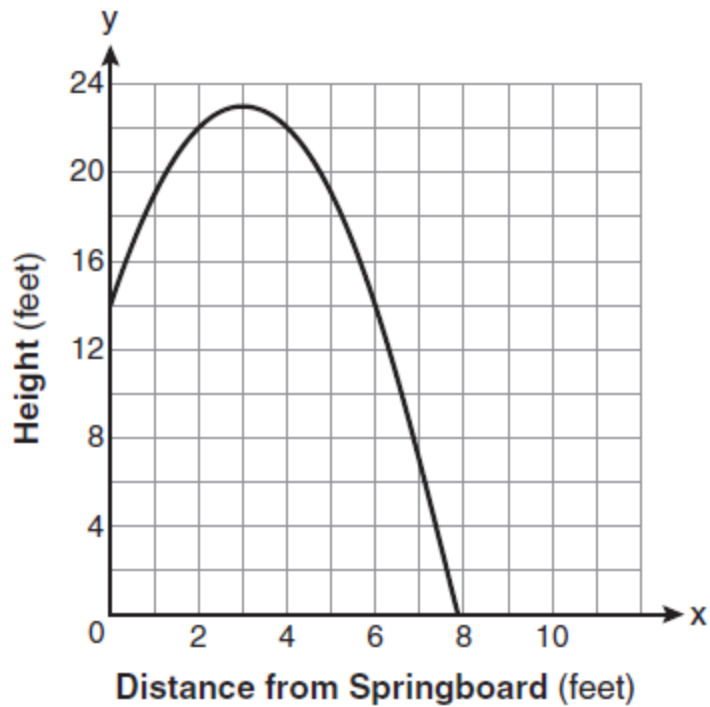

(1)

(3)

(2)

(4)

Question 8.

If $3ax + b = c$, then x equals

(1) $c - b + 3a$

(3) $\dfrac{c - b}{3a}$

(2) $c + b - 3a$

(4) $\dfrac{b - c}{3a}$

Question 9.

A swim team member performs a dive from a 14-foot-high springboard. The parabola below shows the path of her dive.

Which equation represents the axis of symmetry?

(1) $x = 3$

(3) $x = 23$

(2) $y = 3$

(4) $y = 23$

Question 10.

Which ordered pair is in the solution set of the following system of inequalities?

$$y < \frac{1}{2}x + 4$$

$$y \geq -x + 1$$

(1) (−5,3)   (3) (3,−5)

(2) (0,4)   (4) (4,0)

Bonus Question

Question 11a.

On a certain day in Toronto, Canada, the temperature was $15°$ Celsius (C). Using the formula $F = \frac{9}{5}C + 32$, Peter converts this temperature to degrees Fahrenheit (F). Which temperature represents 15°C in degrees Fahrenheit?

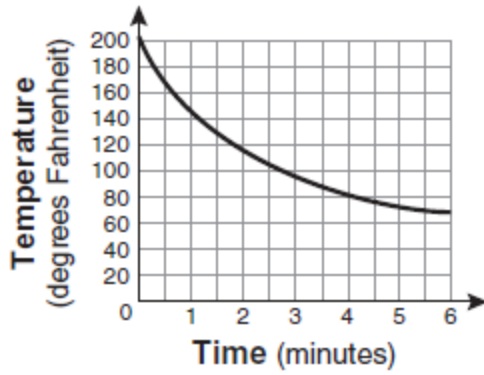(1) −9   (3) 59
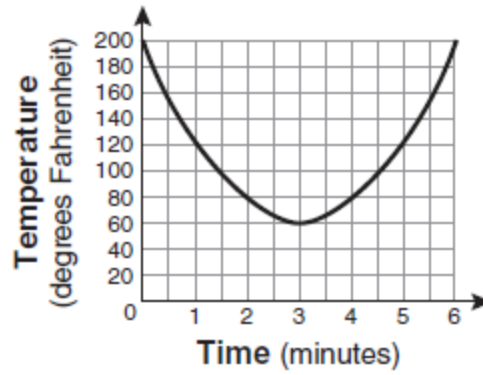
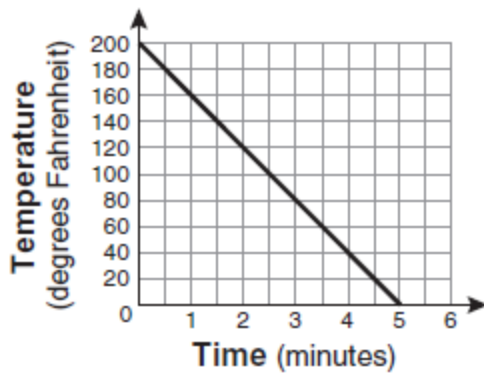(2) 35   (4) 85

Question 11 b.

Antwaan leaves a cup of hot chocolate on the counter in his kitchen. Which graph is the best representation of the change in temperature of his hot chocolate over time?
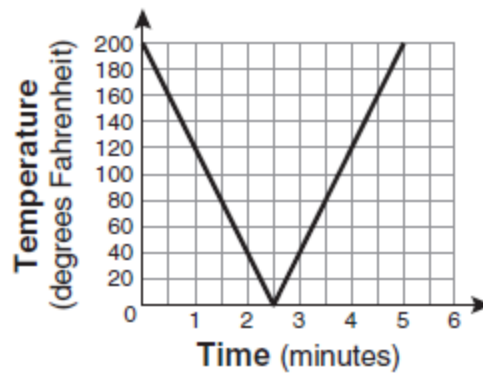

(1)

(3)

(2)

(4)