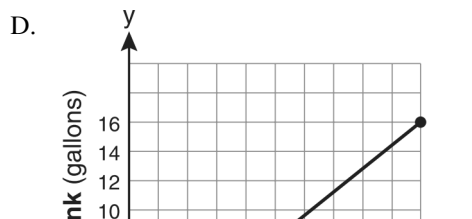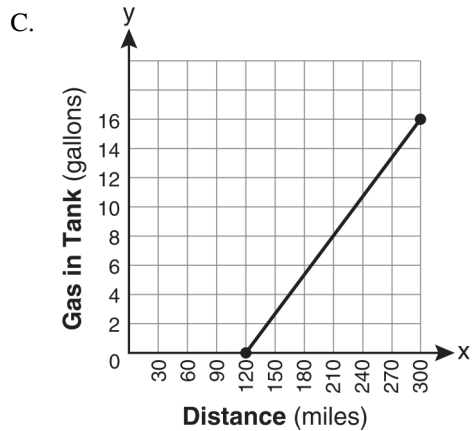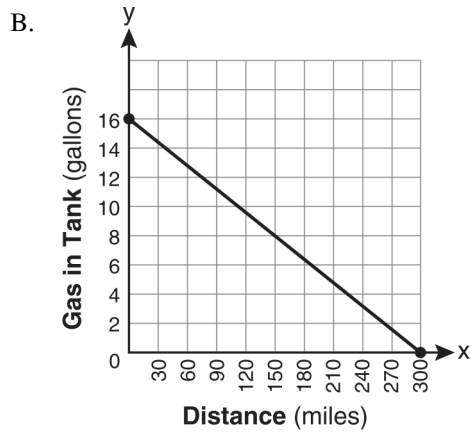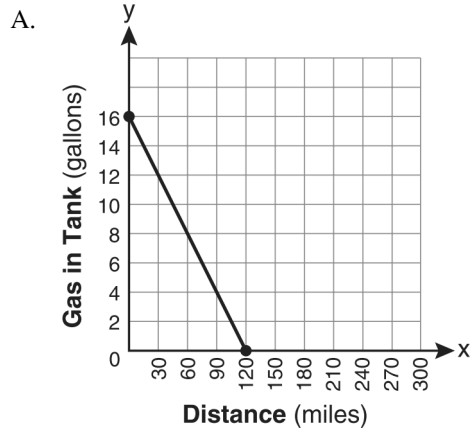**Name:** _____

Date: _____

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

    A. $\frac{19}{7}$ B. $\frac{19}{3}$ C. 3   D. 7

2. 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?

    A. $3x - 8 > 15$ B. $3x - 8 < 15$

    C. $8 - 3x > 15$ D. $8 - 3x < 15$

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

    A. -2 B. 2   C. 3   D. -4

4. 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?
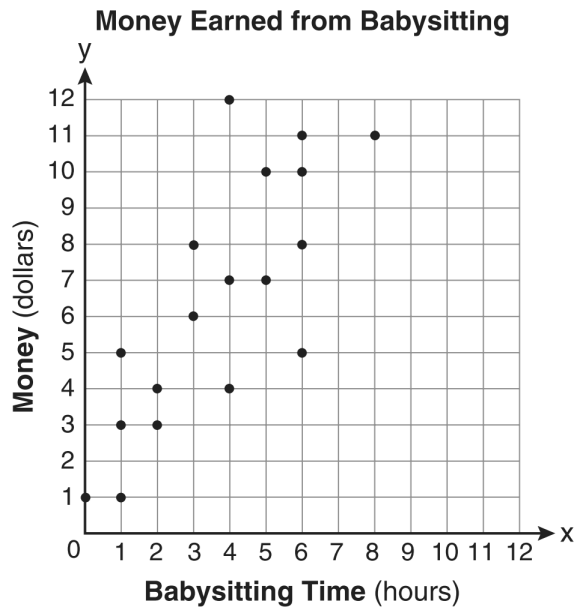
A.

B.

C.

D.

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

   A. $c - b + 3a$ B. $c + b - 3a$

   C. $\dfrac{c - b}{3a}$ D. $\dfrac{b - c}{3a}$

6. The length of the hypotenuse of a right triangle is 34 inches and the length of one of its legs is 16 inches. What is the length, in inches, of the other leg of this right triangle?

   A. 16   B. 18   C. 25   D. 30

7. Which equation represents a line parallel to the x-axis?

   A. $x = 5$ B. $y = 10$

   C. $x = \frac{1}{3}y$ D. $y = 5x + 17$

8. Sam and Odel have been selling frozen pizzas for a class fundraiser. Sam has sold half as many pizzas as Odel. Together they have sold a total of 126 pizzas. How many pizzas did Sam sell?

   A. 21   B. 42   C. 63   D. 84

9. Nicole's aerobics class exercises to fast-paced music. If the rate of the music is 120 beats per minute, how many beats would there be in a class that is 0.75 hour long?

   A. 90   B. 160   C. 5,400   D. 7,200

10. John is going to line up his four golf trophies on a shelf in his bedroom. How many different possible arrangements can he make?

    A. 24   B. 16   C. 10   D. 4

11. A rectangle has an area of 24 square units. The width is 5 units less than the length. What is the length, in units, of the rectangle?

    A. 6   B. 8   C. 3   D. 19

12. When $3g^2 - 4g + 2$ is subtracted from $7g^2 + 5g - 1$, the difference is

    A. $-4g^2 - 9g + 3$ B. $4g^2 + g + 1$

    C. $4g^2 + 9g - 3$ D. $10g^2 + g + 1$

13. Which value of x is the solution of $\dfrac{2x}{5} + \dfrac{1}{3} = \dfrac{7x - 2}{15}$?

    A. $\frac{3}{5}$ B. $\frac{31}{26}$ C. 3   D. 7

14. Which equation most closely represents the line of best fit for the scatter plot below?

Money Earned from Babysitting

A. $y = x$

B. $y = \frac{2}{3}x + 1$

C. $y = \frac{3}{2}x + 4$

D. $y = \frac{3}{2}x + 1$

15. In a linear equation, the independent variable increases at a constant rate while the dependent variable decreases at a constant rate. The slope of this line is

A. zero

B. negative

C. positive

D. undefined

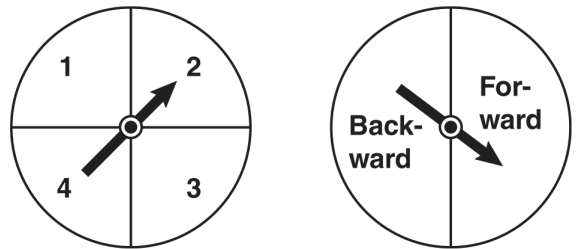16. Which expression is equivalent to $(3x^2)^3$?

A. $9x^5$ B. $9x^6$ C. $27x^5$ D. $27x^6$

17. The faces of a cube are numbered from 1 to 6. If the cube is tossed once, what is the probability that a prime number or a number divisible by 2 is obtained?

A. $\frac{6}{6}$ B. $\frac{5}{6}$ C. $\frac{4}{6}$ D. $\frac{1}{6}$

18. In a game of ice hockey, the hockey puck took 0.8 second to travel 89 feet to the goal line. Determine the average speed of the puck in feet per second.

19. Brianna is using the two spinners shown below to play her new board game. She spins the arrow on each spinner once. Brianna uses the first spinner to determine how many spaces to move. She uses the second spinner to determine whether her move from the first spinner will be forward or backward.

Find the probability that Brianna will move *fewer than* four spaces and *backward*.

20. Twelve players make up a high school basketball team. The team jerseys are numbered 1 through 12. The players wearing the jerseys numbered 3, 6, 7, 8, and 11 are the only players who start a game. Using set notation, list the complement of this subset.

21. Express the product of $3\sqrt{20}(2\sqrt{5} - 7)$ in simplest radical form.

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

23. The cost of 3 markers and 2 pencils is $1.80. The cost of 4 markers and 6 pencils is $2.90. What is the cost of each item? Include appropriate units in your answer.

CRCT Quiz #2   01/16/2013

1.
Answer: D

2.
Answer: A

3.
Answer: D

4.
Answer: B

5.
Answer: C

6.
Answer: D

7.
Answer: B

8.
Answer: B

9.
Answer: C

10.
Answer: A

11.
Answer: B

12.
Answer: C

13.
Answer: D

14.
Answer: D

15.
Answer: B

16.
Answer: D

17.
Answer: B

18.
Answer: 111.25

19.
Answer: $\frac{3}{8}$

20.
Answer: $\{1, 2, 4, 5, 9, 10, 12\}$

21.
Answer: $60 - 42\sqrt{5}$

22.
Answer: $y - 4 = \frac{2}{5}(x - 5)$

23.
Answer: a marker = $.50 and a pencil $.15