Name: _____   **Date:** _____

1. It takes Tammy 45 minutes to ride her bike 5 miles. At this rate, how long will it take her to ride 8 miles?

   A. 0.89 hour   B. 1.125 hours

   C. 48 minutes   D. 72 minutes

2. Which expression represents $\dfrac{27x^{18}y^5}{9x^6y}$ in simplest form?

   A. $3x^{12}y^4$ B. $3x^3y^5$

   C. $18x^{12}y^4$ D. $18x^3y^5$

3. Marie currently has a collection of 58 stamps. If she buys s stamps each week for w weeks, which expression represents the total number of stamps she will have?

   A. $58sw$ B. $58 + sw$

   C. $58s + w$ D. $58 + s + w$

4. The sign shown below is posted in front of a roller coaster ride at the Wadsworth County Fairgrounds.

   All riders **MUST** be at least 48 inches tall.
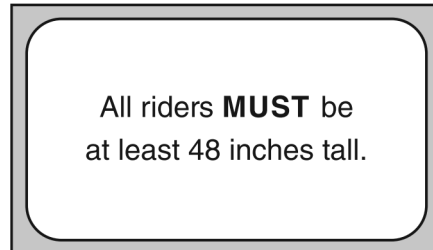
   If h represents the height of a rider in inches, what is a correct translation of the statement on this sign?

   A. $h < 48$ B. $h > 48$

   C. $h \leq 48$ D. $h \geq 48$

5. Students in Ms. Nazzeer's mathematics class tossed a six-sided number cube whose faces are numbered 1 to 6. The results are recorded in the table below.
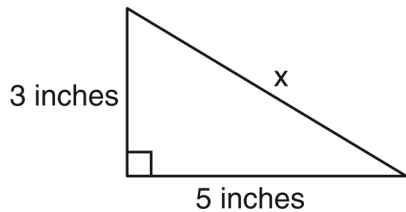
Result	Frequency
1	3
2	6
3	4
4	6
5	4
6	7

   Based on these data, what is the empirical probability of tossing a 4?

   A. $\frac{8}{30}$ B. $\frac{6}{30}$ C. $\frac{5}{30}$ D. $\frac{1}{30}$

6. What is the value of x, in inches, in the right triangle below?

3 inches

x

5 inches

   A. $\sqrt{15}$ B. 8   C. $\sqrt{34}$ D. 4

7. What is $\sqrt{32}$ expressed in simplest radical form?

   A. $16\sqrt{2}$ B. $4\sqrt{2}$ C. $4\sqrt{8}$ D. $2\sqrt{8}$

8. The sum of two numbers is 47, and their difference is 15. What is the larger number?

   A. 16   B. 31   C. 32   D. 36

9. Which value of x is in the solution set of $\frac{4}{3}x + 5 < 17$?

   A. 8   B. 9   C. 12   D. 16

10. Which statement is true about the relation shown on the graph below?
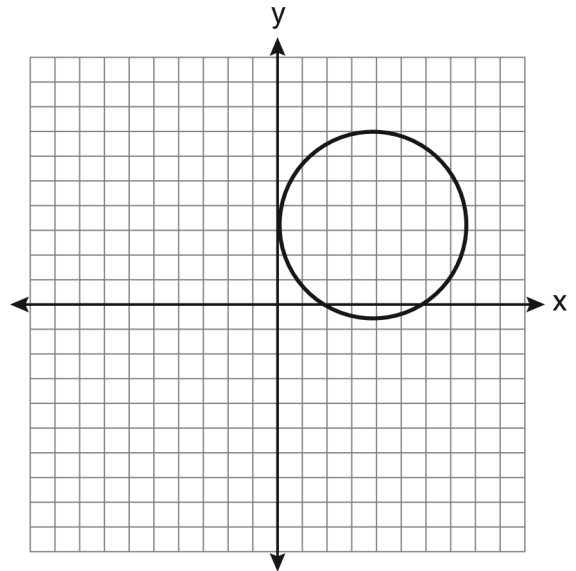
   A. It is a function because there exists one x-coordinate for each y-coordinate.

   B. It is a function because there exists one y-coordinate for each x-coordinate.

   C. It is not a function because there are multiple y-values for a given x-value.

   D. It is not a function because there are multiple x-values for a given y-value.

11. What is an equation of the line that passes through the point $(4, -6)$ and has a slope of -3?

   A. $y = -3x + 6$ B. $y = -3x - 6$

   C. $y = -3x + 10$ D. $y = -3x + 14$

12. When $4x^2 + 7x - 5$ is subtracted from $9x^2 - 2x + 3$, the result is

    A. $5x^2 + 5x - 2$ B. $5x^2 - 9x + 8$

    C. $-5x^2 + 5x - 2$ D. $-5x^2 + 9x - 8$

13. What is the value of the y-coordinate of the solution to the system of equations $x + 2y = 9$ and $x - y = 3$?

    A. 6   B. 2   C. 3   D. 5

14. What is the product of 12 and 4.2×10^6 expressed in scientific notation?

    A. 50.4×10^6 B. 50.4×10^7

    C. 5.04×10^6 D. 5.04×10^7

15. What is $\dfrac{6}{4a} - \dfrac{2}{3a}$ expressed in simplest form?

    A. $\dfrac{4}{a}$ B. $\dfrac{5}{6a}$ C. $\dfrac{8}{7a}$ D. $\dfrac{10}{12a}$

16. Some books are laid on a desk. Two are English, three are mathematics, one is French, and four are social studies. Theresa selects an English book and Isabelle then selects a social studies book. Both girls take their selections to the library to read. If Truman then selects a book at random, what is the probability that he selects an English book?

17. The table below shows the number of prom tickets sold over a ten-day period.

    Prom Ticket Sales

Day (x)	1	2	5	7	10
Number of Prom Tickets Sold (y)	30	35	55	60	70

Plot these data points on the coordinate grid below. Use a consistent and appropriate scale. Draw a reasonable line of best fit and write its equation.

Prom Ticket Sales

CRCT Quiz #4   01/16/2013
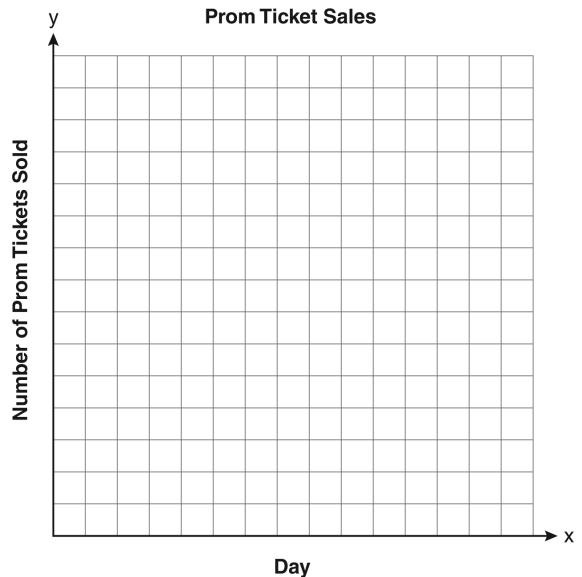
1.
Answer: D

2.
Answer: A

3.
Answer: B

4.
Answer: D

5.
Answer: B

6.
Answer: C

7.
Answer: B

8.
Answer: B

9.
Answer: A

10.
Answer: C

11.
Answer: A

12.
Answer: B

13.
Answer: B

14.
Answer: D

15.
Answer: B

16.
Answer: $\frac{1}{8}$

17.