

CRCT Quiz #3

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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

- A. -9    B. 35    C. 59    D. 85

2. What is the speed, in meters per second, of a paper airplane that flies 24 meters in 6 seconds?

- A. 144    B. 30    C. 18    D. 4

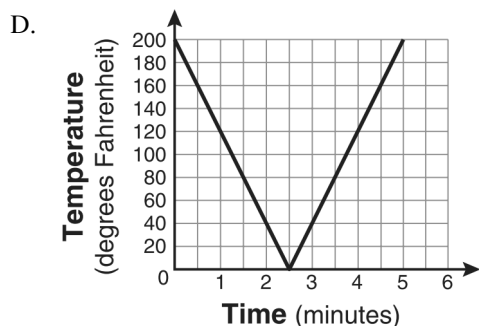
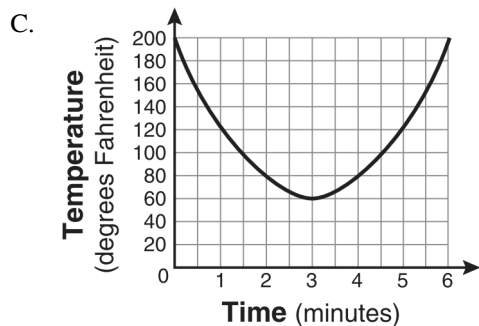
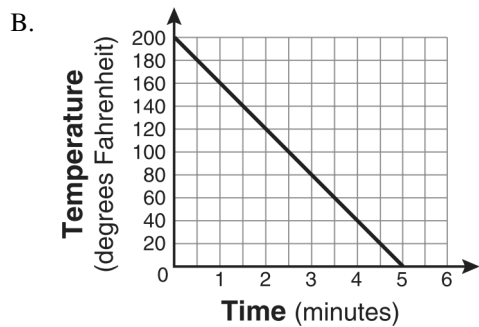
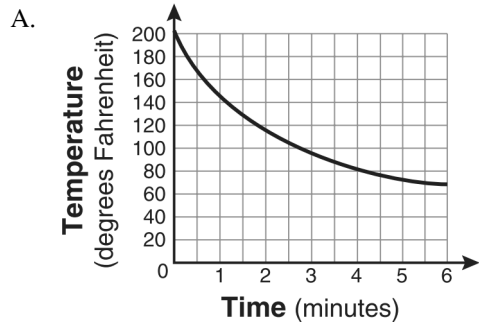
3. The faces of a cube are numbered from 1 to 6. If the cube is rolled once, which outcome is *least* likely to occur?

- A. rolling an odd number  
 B. rolling an even number  
 C. rolling a number less than 6  
 D. rolling a number greater than 4

4. Tamara has a cell phone plan that charges \$0.07 per minute plus a monthly fee of \$19.00. She budgets \$29.50 per month for total cell phone expenses without taxes. What is the maximum number of minutes Tamara could use her phone each month in order to stay within her budget?

- A. 150    B. 271    C. 421    D. 692

5. 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?



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6. What is the solution of  $\frac{k+4}{2} = \frac{k+9}{3}$ ?
- A. 1      B. 5      C. 6      D. 14
7. What is an equation of the line that passes through the points  $(3, -3)$  and  $(-3, -3)$ ?
- A.  $y = 3$                       B.  $x = -3$   
 C.  $y = -3$                       D.  $x = y$
8. If the formula for the perimeter of a rectangle is  $P = 2l + 2w$ , then  $w$  can be expressed as
- A.  $w = \frac{2l - P}{2}$                       B.  $w = \frac{P - 2l}{2}$   
 C.  $w = \frac{P - l}{2}$                       D.  $w = \frac{P - 2w}{2l}$
9. What is the slope of the line that passes through the points  $(2, 5)$  and  $(7, 3)$ ?
- A.  $-\frac{5}{2}$       B.  $-\frac{2}{5}$       C.  $\frac{8}{9}$       D.  $\frac{9}{8}$
10. Rhonda has \$1.35 in nickels and dimes in her pocket. If she has six more dimes than nickels, which equation can be used to determine  $x$ , the number of nickels she has?
- A.  $0.05(x + 6) + 0.10x = 1.35$   
 B.  $0.05x + 0.10(x + 6) = 1.35$   
 C.  $0.05 + 0.10(6x) = 1.35$   
 D.  $0.15(x + 6) = 1.35$
11. What is the value of  $x$  in the equation  $\frac{2}{x} - 3 = \frac{26}{x}$ ?
- A.  $-8$       B.  $-\frac{1}{8}$       C.  $\frac{1}{8}$       D.  $8$
12. What is  $\sqrt{72}$  expressed in simplest radical form?
- A.  $2\sqrt{18}$       B.  $3\sqrt{8}$       C.  $6\sqrt{2}$       D.  $8\sqrt{3}$
13. What is  $\frac{6}{5x} - \frac{2}{3x}$  in simplest form?
- A.  $\frac{8}{15x^2}$       B.  $\frac{8}{15x}$       C.  $\frac{4}{15x}$       D.  $\frac{4}{2x}$

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14. The length of a rectangular room is 7 less than three times the width,  $w$ , of the room. Which expression represents the area of the room?

A.  $3w - 4$                       B.  $3w - 7$   
C.  $3w^2 - 4w$                   D.  $3w^2 - 7w$

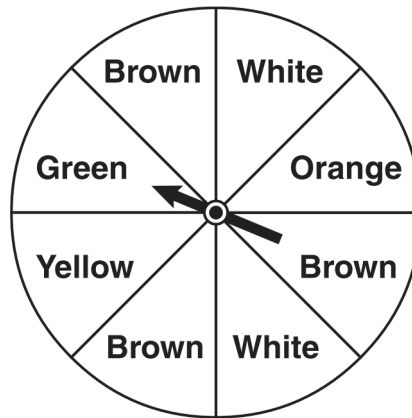
15. Which equation represents a line that is parallel to the line  $y = 3 - 2x$ ?

A.  $4x + 2y = 5$                 B.  $2x + 4y = 1$   
C.  $y = 3 - 4x$                     D.  $y = 4x - 2$

16. What is the product of  $8.4 \times 10^8$  and  $4.2 \times 10^3$  written in scientific notation?

A.  $2.0 \times 10^5$                       B.  $12.6 \times 10^{11}$   
C.  $35.28 \times 10^{11}$                   D.  $3.528 \times 10^{12}$

17. Keisha is playing a game using a wheel divided into eight equal sectors, as shown in the diagram below. Each time the spinner lands on orange, she will win a prize.

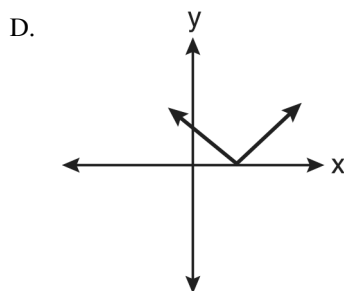
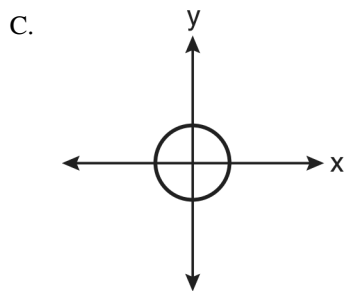
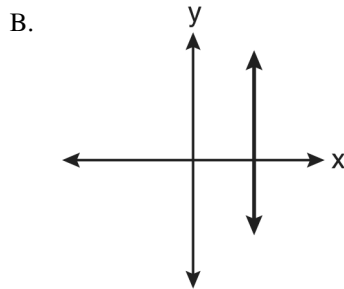
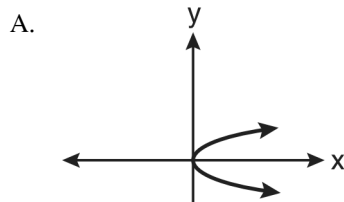


If Keisha spins this wheel twice, what is the probability she will win a prize on *both* spins?

A.  $\frac{1}{64}$                       B.  $\frac{1}{56}$                       C.  $\frac{1}{16}$                       D.  $\frac{1}{4}$

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18. Which graph represents a function?



19. Simplify:  $\frac{27k^5m^8}{(4k^3)(9m^2)}$

20. The table below represents the number of hours a student worked and the amount of money the student earned.

Number of Hours ( $h$ )	Dollars Earned ( $d$ )
8	\$50.00
15	\$93.75
19	\$118.75
30	\$187.50

Write an equation that represents the number of dollars,  $d$ , earned in terms of the number of hours,  $h$ , worked.

Using this equation, determine the number of dollars the student would earn for working 40 hours.

21. A soup can is in the shape of a cylinder. The can has a volume of  $342 \text{ cm}^3$  and a diameter of 6 cm. Express the height of the can in terms of  $\pi$ .

Determine the maximum number of soup cans that can be stacked on their base between two shelves if the distance between the shelves is exactly 36 cm. Explain your answer.

22. Solve the following system of equations algebraically:

$$3x + 2y = 4$$

$$4x + 3y = 7$$

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1.  
Answer:      C

2.  
Answer:      D

3.  
Answer:      D

4.  
Answer:      A

5.  
Answer:      A

6.  
Answer:      C

7.  
Answer:      C

8.  
Answer:      B

9.  
Answer:      B

10.  
Answer:      B

11.  
Answer:      A

12.  
Answer:      C

13.  
Answer:      B

14.  
Answer:      D

15.  
Answer:      A

16.  
Answer:      D

17.  
Answer:      A

18.  
Answer:      D

19.  
Answer:       $\frac{3k^2m^6}{4}$

20.  
Answer:       $d = 6.25h$ ; \$250

21.  
Answer:       $\frac{38}{\pi}$  and 2

22.  
Answer:       $(-2, 5)$