

CRCT Quiz #5

Name: _____

Date: _____

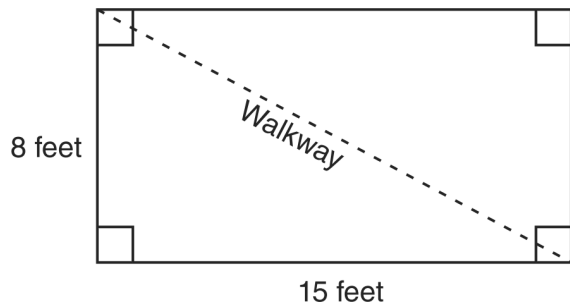
1. If h represents a number, which equation is a correct translation of "Sixty more than 9 times a number is 375"?

- A. $9h = 375$ B. $9h + 60 = 375$
 C. $9h - 60 = 375$ D. $60h + 9 = 375$

2. An online music club has a one-time registration fee of \$13.95 and charges \$0.49 to buy each song. If Emma has \$50.00 to join the club and buy songs, what is the maximum number of songs she can buy?

- A. 73 B. 74 C. 130 D. 131

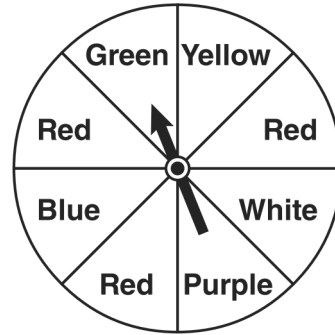
3. Nancy's rectangular garden is represented in the diagram below.



If a diagonal walkway crosses her garden, what is its length, in feet?

- A. 17 B. 22 C. $\sqrt{161}$ D. $\sqrt{529}$

4. The spinner below is divided into eight equal regions and is spun once. What is the probability of *not* getting red?



- A. $\frac{3}{5}$ B. $\frac{3}{8}$ C. $\frac{5}{8}$ D. $\frac{7}{8}$

5. Solve for x : $\frac{3}{5}(x + 2) = x - 4$

- A. 8 B. 13 C. 15 D. 23

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

- A. $y = -5$ B. $y = -5x$
 C. $x = 3$ D. $x = 3y$

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7. Given:

$A = \{\text{All even integers from 2 to 20, inclusive}\}$

$B = \{10, 12, 14, 16, 18\}$

What is the complement of set B within the universe of set A ?

- A. $\{4, 6, 8\}$ B. $\{2, 4, 6, 8\}$
 C. $\{4, 6, 8, 20\}$ D. $\{2, 4, 6, 8, 20\}$

8. Which value of x is in the solution set of the inequality $-2(x - 5) < 4$?

- A. 0 B. 2 C. 3 D. 5

9. What is the slope of the line that passes through the points $(-5, 4)$ and $(15, -4)$?

- A. $-\frac{2}{5}$ B. 0
 C. $-\frac{5}{2}$ D. undefined

10. What is the sum of $\frac{3}{2x}$ and $\frac{4}{3x}$ expressed in simplest form?

- A. $\frac{12}{6x^2}$ B. $\frac{17}{6x}$ C. $\frac{7}{5x}$ D. $\frac{17}{12x}$

11. Which relation is *not* a function?

- A. $\{(1, 5), (2, 6), (3, 6), (4, 7)\}$
 B. $\{(4, 7), (2, 1), (-3, 6), (3, 4)\}$
 C. $\{(-1, 6), (1, 3), (2, 5), (1, 7)\}$
 D. $\{(-1, 2), (0, 5), (5, 0), (2, -1)\}$

12. What is the value of the y -coordinate of the solution to the system of equations $x - 2y = 1$ and $x + 4y = 7$?

- A. 1 B. -1 C. 3 D. 4

13. When $5\sqrt{20}$ is written in simplest radical form, the result is $k\sqrt{5}$. What is the value of k ?

- A. 20 B. 10 C. 7 D. 4

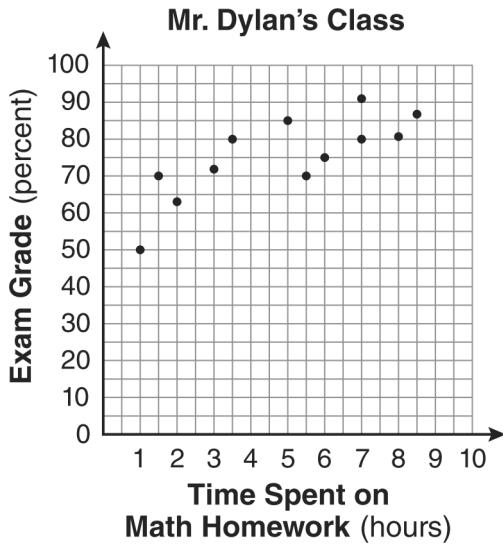
14. What is an equation of the line that passes through the point $(3, -1)$ and has a slope of 2?

- A. $y = 2x + 5$ B. $y = 2x - 1$
 C. $y = 2x - 4$ D. $y = 2x - 7$

15. The ages of three brothers are consecutive even integers. Three times the age of the youngest brother exceeds the oldest brother's age by 48 years. What is the age of the *youngest* brother?

- A. 14 B. 18 C. 22 D. 26

16. The number of hours spent on math homework each week and the final exam grades for twelve students in Mr. Dylan's algebra class are plotted below.



Based on a line of best fit, which exam grade is the best prediction for a student who spends about 4 hours on math homework each week?

- A. 62 B. 72 C. 82 D. 92

17. Chad complained to his friend that he had five equations to solve for homework. Are all of the homework problems equations? Justify your answer.

Math Homework

1. $3x^2 \cdot 2x^4$
2. $5 - 2x = 3x$
3. $3(2x + 7)$
4. $7x^2 + 2x - 3x^2 - 9$
5. $\frac{2}{3} = \frac{x+2}{6}$

Name Chad

18. Clayton has three fair coins. Find the probability that he gets two tails and one head when he flips the three coins.

19. The chart below compares two runners.

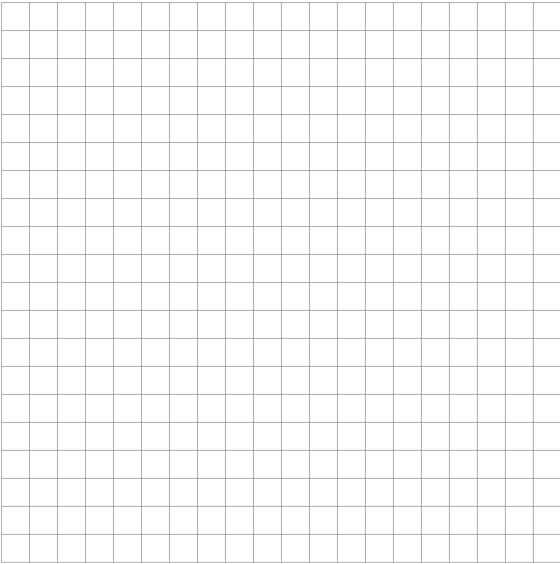
Runner	Distance, in miles	Time, in hours
Greg	11	2
Dave	16	3

Based on the information in this chart, state which runner has the faster rate. Justify your answer.

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20. On the grid below, solve the system of equations graphically for x and y .

$$4x - 2y = 10$$
$$y = -2x - 1$$



1.
Answer: B
2.
Answer: A
3.
Answer: A
4.
Answer: C
5.
Answer: B
6.
Answer: A
7.
Answer: D
8.
Answer: D
9.
Answer: A
10.
Answer: B
11.
Answer: C
12.
Answer: A
13.
Answer: B
14.
Answer: D
15.
Answer: D
16.
Answer: B
- 17.
- 18.
- 19.
- 20.