

CRCT Quiz #7

Name: _____

Date: _____

1. The sum of $4x^3 + 6x^2 + 2x - 3$ and $3x^3 + 3x^2 - 5x - 5$ is
- A. $7x^3 + 3x^2 - 3x$ B. $7x^3 + 3x^2 + 7x + 2$
 C. $7x^3 + 9x^2 - 3x - 8$ D. $7x^6 + 9x^4 - 3x^2 - 8$

2. What is the slope of the line that passes through the points $(3, 5)$ and $(-2, 2)$?
- A. $\frac{1}{5}$ B. $\frac{3}{5}$ C. $\frac{5}{3}$ D. 5

3. Three high school juniors, Reese, Matthew, and Chris, are running for student council president. A survey is taken a week before the election asking 40 students which candidate they will vote for in the election. The results are shown in the table below.

Candidate's Name	Number of Students Supporting Candidate
Reese	15
Matthew	13
Chris	12

Based on the table, what is the probability that a student will vote for Reese?

- A. $\frac{1}{3}$ B. $\frac{3}{5}$ C. $\frac{3}{8}$ D. $\frac{5}{8}$

4. Which linear equation represents a line containing the point $(1, 3)$?

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

5. The expression $\sqrt{72} - 3\sqrt{2}$ written in simplest radical form is

- A. $5\sqrt{2}$ B. $3\sqrt{6}$ C. $3\sqrt{2}$ D. $\sqrt{6}$

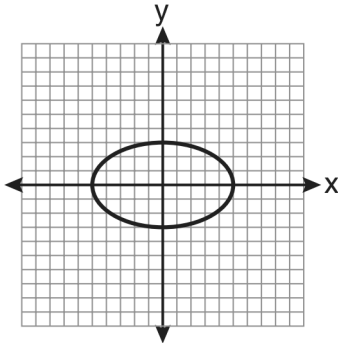
6. What is the solution of the system of equations $c + 3d = 8$ and $c = 4d - 6$?

- A. $c = -14, d = -2$ B. $c = -2, d = 2$
 C. $c = 2, d = 2$ D. $c = 14, d = -2$

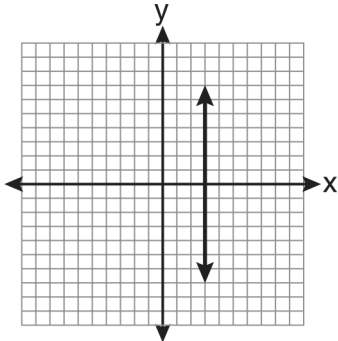
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7. Which graph represents a function?

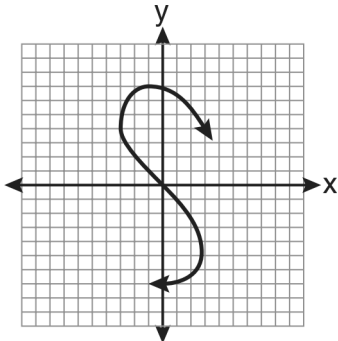
A.



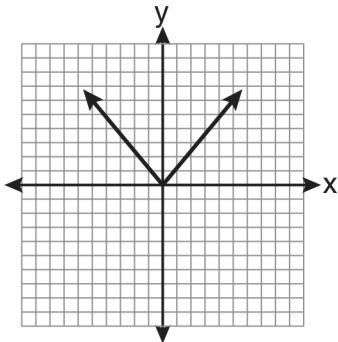
B.



C.



D.



8. The graphs of the equations $y = 2x - 7$ and $y - kx = 7$ are parallel when k equals

- A. -2 B. 2 C. -7 D. 7

9. Which verbal expression is represented by $\frac{1}{2}(n - 3)$?

- A. one-half n decreased by 3
 B. one-half n subtracted from 3
 C. the difference of one-half n and 3
 D. one-half the difference of n and 3

10. Which expression represents $\frac{-14a^2c^8}{7a^3c^2}$ in simplest form?

- A. $-2ac^4$ B. $-2ac^6$ C. $\frac{-2c^4}{a}$ D. $\frac{-2c^6}{a}$

11. A formula used for calculating velocity is $v = \frac{1}{2}at^2$. What is a expressed in terms of v and t ?

- A. $a = \frac{2v}{t}$ B. $a = \frac{2v}{t^2}$
 C. $a = \frac{v}{t}$ D. $a = \frac{v}{2t^2}$

12. Steve ran a distance of 150 meters in $1\frac{1}{2}$ minutes. What is his speed in meters per hour?

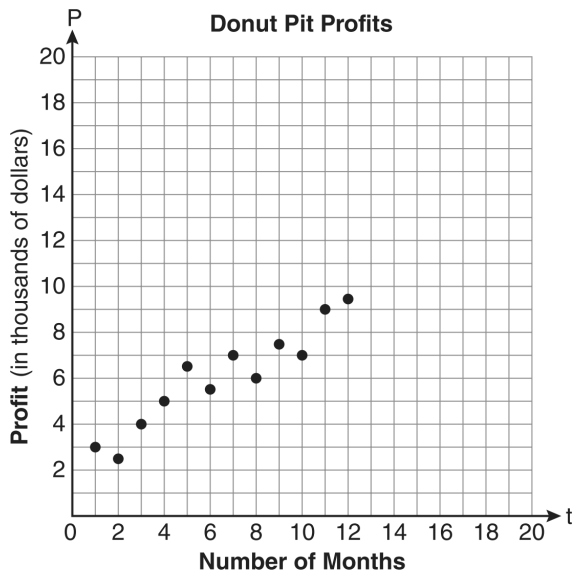
- A. 6 B. 60 C. 100 D. 6,000

13. Perform the indicated operation: $-6(a - 7)$

State the name of the property used.

14. Megan and Bryce opened a new store called the Donut Pit. Their goal is to reach a profit of \$20,000 in their 18th month of business. The table and scatter plot below represent the profit, P , in thousands of dollars, that they made during the first 12 months.

t (months)	1	2	3	4	5	6	7	8	9	10	11	12
P (profit, in thousands of dollars)	3.0	2.5	4.0	5.0	6.5	5.5	7.0	6.0	7.5	7.0	9.0	9.5



Draw a reasonable line of best fit.

Using the line of best fit, predict whether Megan and Bryce will reach their goal in the 18th month of their business.

Justify your answer.

- | | |
|---------|--|
| 1. | |
| Answer: | C |
| 2. | |
| Answer: | B |
| 3. | |
| Answer: | C |
| 4. | |
| Answer: | C |
| 5. | |
| Answer: | C |
| 6. | |
| Answer: | C |
| 7. | |
| Answer: | D |
| 8. | |
| Answer: | B |
| 9. | |
| Answer: | D |
| 10. | |
| Answer: | D |
| 11. | |
| Answer: | B |
| 12. | |
| Answer: | D |
| 13. | |
| Answer: | $-6a + 42$ |
| 14. | |
| Answer: | An appropriate line of best fit is drawn, and “No,” and an appropriate justification is written. |