

ALGEBRA 2

Quiz # 5

Name: _____ Date: _____ Score: _____

I. MULTIPLE CHOICES: Encircle the letter of the best answer.

1. It is a type of system of linear equations which has infinite solutions.

- a. consistent-independent
- b. consistent-dependent
- c. inconsistent
- d. consistent

B. Elimination

- 1. $5x + 2y = 12$
 $-6x - 2y = -14$

2. Which of the following describes inconsistent system of equations?

- a. $3y = 8 - 12x$
 $y + 4x = 12$
- b. $5x + 4y = 13$
 $-2y = 11 - 9x$
- c. $4x + 6y = -18$
 $-2x - 3y = 9$
- d. $2x + 4y = 12$
 $-5x - 10y = -30$

- 2. $5a + 2b = -8$
 $4a + 3b = 2$

3. A type of system of equations which graphs are two intersecting lines.

- a. consistent-independent
- b. consistent-dependent
- c. inconsistent-dependent
- d. inconsistent

C. Cramer's Rule

- 1. $3a + 5b = 33$
 $5a + 7b = 51$

4. It is an array of numbers/variables in columns and in rows that is normally enclosed by brackets.

- a. determinants
- b. matrix
- c. element
- d. Cramer's Rule

5. What is the value of the determinant below?

$$\begin{vmatrix} 4 & 3 \\ -2 & 7 \end{vmatrix}$$

- a. 34
- b. 22
- c. -34
- d. -22

- 2. $1.5x + 0.7y = 0.5$
 $2.2x - 0.6y = -7.4$

II. Solve each system of linear equation using each indicated method.

A. Substitution

- 1. $3x + y = 7$
 $4x + 2y = 16$

- 2. $2x + 2y = 4$
 $x - 2y = 0$

III. Problem Solving: Read and solve each problem completely.

- 1. Last year, Jennifer's volleyball team paid \$5 per pair of socks and \$17 per pair of shorts on a total purchase of \$315. This year, they spent

\$342 to buy the same number of pairs of socks and shorts because the socks now cost \$6 a pair and the shorts cost \$18.

a. Write the system of equations that describes this situation?

b. How many pairs of socks and shorts did Jennifer's team buy each year?
(Write your solution)

2. Suppose Rent-A-Truck's rates are \$50 a day plus 50¢ per mile and George's U-Drive's are \$70 a day plus 45¢ per mile.

a. Find the mileage at which the cost for the two would be the same.

b. What is the cost?

c. When is it best to rent the Rent-A-Truck and George's U-Drive?