

OGT Preparation #9
AL08 - Systems of Equations

Name _____

1. A system of equations is shown below.

$$3x + 2y = 19$$

$$2x - y = 1$$

What is the solution to the system of equations?

A. $x = 1, y = 1$

B. $x = 3, y = 5$

C. $x = 7, y = -1$

D. $x = 19, y = 1$

2. For every lawn that she mows, Jane charges \$8 per hour for every hour that she works. For each lawn that he mows, Bob charges a fixed fee of \$20 and an additional \$5 for every hour that he works. What is the fewest number of hours that both could work so that Jane's total pay for a lawn will be greater than Bob's?

A. 1 hour

B. 5 hours

C. 6 hours

D. 7 hours

3. Sara ordered 2 slices of pizza and a 12-ounce cola and paid \$3.00. Sydney ordered 3 slices of pizza and 2 12-ounce colas for \$4.75. How much does a slice of pizza cost?

A. \$0.50

B. \$1.00

C. \$1.25

D. \$2.50

4. Roni and Kelsey bought the same types of flowers from a florist. Roni bought 5 roses and 2 carnations and was charged \$17.85 before tax. Kelsey purchased 1 rose and 6 carnations and was charged \$12.25 before tax. How much did the florist charge for 1 carnation before tax?

A. \$1.12

B. \$1.55

C. \$2.15

D. \$2.80

5. [SA] Cameron had \$500 in savings on January 1. Quinn had \$800 in savings on January 1. Cameron deposits \$20 per week into his savings account. Quinn withdraws \$15 per week from his savings account.

In your **Answer Document**, write two equations: one for the amount of money in Cameron's savings x weeks after January 1st, and one for the amount of money in Quinn's savings x weeks after January 1st. Determine the number of weeks until Cameron will have more money in his savings account than Quinn. Show your work or provide an explanation for your answer.

6. [SA] Mrs. Foyle told Yolanda that her test had 38 problems worth a total of 100 points. Each test problem is worth either 5 points or 2 points. Yolanda wanted to determine how many 2-point and how many 5-point questions are on the test.

In your **Answer Document**, determine how many questions of each point-value are on the test. Show your work or provide an explanation to support your answer.

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