

Name: _____ Date: _____ Period: _____

Unit 4 Day 5 - Solving Systems of Equations using Combinations Classwork

1. Sonia bought 5 oranges and 3 bananas for \$1.75. Ellen bought 10 oranges and 7 bananas for \$3.80. How much does an orange cost and how much does a banana cost?

Write a pair of equations for the situation and explain how you got your answer.

2. Trisha and Byron are washing and vacuuming cars to raise money for a class trip. Trisha raised \$38 washing 5 cars and vacuuming 4 cars. Byron raised \$28 by washing 4 cars and vacuuming 2 cars. Find the amount they charged to wash a car and vacuum a car.

Write a pair of equations for the situation and explain how you got your answer.

3. On Monday, Arnold paid \$3.40 for three donuts and two hot chocolates. On Tuesday, he paid \$3.60 for two donuts and three hot chocolates. On Wednesday, he bought one donut and one hot chocolate. What was his bill for one donut and one hot chocolate?

Write a pair of equations for the situation and explain how you got your answer.

Use what you learned from the three previous problems to explain how to solve the following systems of equations.

$$4. \begin{cases} 2x + 3y = 4 \\ 5x + 3y = -8 \end{cases}$$

$$5. \begin{cases} 2x + 6y = 7 \\ 3x - 2y = 5 \end{cases}$$

$$6. \begin{cases} 4x + 7y = 54 \\ -36x - 45y = 54 \end{cases}$$

$$7. \begin{cases} 7x + 19y = -27 \\ 5x + 6y = 11 \end{cases}$$