

Hello,

Hope everyone is doing well. In light of recent events, we have moved to an online learning format. Every week I will provide you with work to be completed and links that correlate with the given assignment. Should you have any questions please email me at sshareeq@pfpcs.org.

Best,

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Week 1:

SWBAT solve system of equations through substitution

SWBAT solve systems of equation word problems

Solving systems through substitution:

<https://www.youtube.com/watch?v=xzuouSZ69XU>

<https://www.youtube.com/watch?v=F5oLU9qjYIo>

<https://www.youtube.com/watch?v=O8zps4mwQT8>

Creating equations from word problems:

<https://www.youtube.com/watch?v=JcDx3N6S0F8>

<https://www.youtube.com/watch?v=OMjfPxhbf-0>

Solving Systems Through Substitution

1) $y = 6x - 11$
 $-2x - 3y = -7$

2) $2x - 3y = -1$
 $y = x - 1$

3) $y = -3x + 5$
 $5x - 4y = -3$

4) $-3x - 3y = 3$
 $y = -5x - 17$

5) $y = -2$
 $4x - 3y = 18$

6) $y = 5x - 7$
 $-3x - 2y = -12$

7) $-4x + y = 6$
 $-5x - y = 21$

8) $-7x - 2y = -13$
 $x - 2y = 11$

$$\begin{aligned} 9) \quad & -5x + y = -2 \\ & -3x + 6y = -12 \end{aligned}$$

$$\begin{aligned} 10) \quad & -5x + y = -3 \\ & 3x - 8y = 24 \end{aligned}$$

$$\begin{aligned} 11) \quad & x + 3y = 1 \\ & -3x - 3y = -15 \end{aligned}$$

$$\begin{aligned} 12) \quad & -3x - 8y = 20 \\ & -5x + y = 19 \end{aligned}$$

$$\begin{aligned} 13) \quad & -3x + 3y = 4 \\ & -x + y = 3 \end{aligned}$$

$$\begin{aligned} 14) \quad & -3x + 3y = 3 \\ & -5x + y = 13 \end{aligned}$$

$$\begin{aligned} 15) \quad & 6x + 6y = -6 \\ & 5x + y = -13 \end{aligned}$$

$$\begin{aligned} 16) \quad & 2x + y = 20 \\ & 6x - 5y = 12 \end{aligned}$$

$$\begin{aligned} 17) \quad & -3x - 4y = 2 \\ & 3x + 3y = -3 \end{aligned}$$

$$\begin{aligned} 18) \quad & -2x + 6y = 6 \\ & -7x + 8y = -5 \end{aligned}$$

$$\begin{aligned} 19) \quad & -5x - 8y = 17 \\ & 2x - 7y = -17 \end{aligned}$$

$$\begin{aligned} 20) \quad & -2x - y = -9 \\ & 5x - 2y = 18 \end{aligned}$$

Solving systems of equation word problems

Directions: Make sure to state the variables, write the equation and solve for all problems.

1. A large pizza at Palanzio's Pizzeria costs \$6.80 plus \$0.90 for each topping. The cost of a large cheese pizza at Guido's Pizza is \$7.30 plus \$0.65 for each topping. How many toppings need to be added to a large cheese pizza from Palanzio's Pizzeria and Guido's Pizza in order for the pizzas to cost the same, not including tax?

2. Ms. Kitts works at a music store. Last week she sold 6 more than 3 times the number of CDs that she sold this week. Ms. Kitts sold a total of 110 CDs over the 2 weeks. Which system of equations can be used to find l , the number of CDs she sold last week, and t , the number of CDs she sold this week?

3. The length of a rectangle is equal to triple the width. Which system of equations can be used to find the dimensions of the rectangle if the perimeter is 86 centimeters?

4. At a restaurant the cost for a breakfast taco and a small glass of milk is \$2.10. The cost for 2 tacos and 3 small glasses of milk is \$5.15. Which pair of equations can be used to determine t , the cost of a taco, and m , the cost of a small glass of milk?

5. The Frosty Ice-Cream Shop sells sundaes for \$2 and banana splits for \$3. On a hot summer day, the shop sold 8 more sundaes than banana splits and made \$156.

6. Chase and Sara went to the candy store. Chase bought 5 pieces of fudge and 3 pieces of bubble gum for a total of \$5.70. Sara bought 2 pieces of fudge and 10 pieces of bubble gum for a total of \$3.60. Which system of equations could be used to determine the cost of 1 piece of fudge, f , and 1 piece of bubble gum, g ?

7. At a college bookstore, Carla purchased a math textbook and a novel that cost a total of \$54, not including tax. If the price of the math textbook, m , is \$8 more than 3 times the price of the novel, n , which system of linear equations could be used to determine the price of each book?

8. The price, e , of an entertainment system at Extreme Electronics is \$220 less than twice the price, u , of the same system at Ultra Electronics. The difference in price between the system at Extreme Electronics and Ultra Electronics is \$175. Which system of linear equations can be used to determine the price of the system at each store?

9. The perimeter of a rectangular wooden deck is 90 feet. The deck's length, l , is 5 feet less than 4 times its width, w . Which system of linear equations can be used to determine the dimensions, in feet, of the wooden deck?

10. Marcos had 15 coins in nickels and quarters. He had 3 more quarters than nickels. He wrote a system of equations to represent this situation, letting x represent the number of nickels and y represent the number of quarters. Then he solved the system by graphing. What is the solution?

11. Some students want to order shirts with their school logo. One company charges \$9.65 per shirt plus a setup fee of \$43. Another company charges \$8.40 per shirt plus a \$58 fee. For what number of shirts would the cost be the same?

12. The equations of two lines are $6x - y = 4$ and $y = 4x + 2$. What is the value of x in the solution for this system of equations?
13. Mrs. Travis wants to have a clown deliver balloons to her secretary's office. Clowns R Fun charges \$1.25 per balloon and \$6 delivery. Singing Balloons charges \$1.95 per balloon and \$2 for delivery. What is the minimum number of balloons Mrs. Travis needs to purchase in order for Clowns R Fun to have a lower price than Singing Balloons?
14. Maricella has a bag containing 35 nickels and quarters. The total value of these coins is less than \$2.50. What is the maximum number of quarters that meets these conditions?
15. Two complementary angles have measures of s and t . If t is less than twice s , which system of linear equations can be used to determine the measure of each angle?

