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

9) $-5x + y = -2$
$-3x + 6y = -12$

10) $-5x + y = -3$
$3x - 8y = 24$

11) $x + 3y = 1$
$-3x - 3y = -15$

12) $-3x - 8y = 20$
$-5x + y = 19$

13) $-3x + 3y = 4$
$-x + y = 3$

14) $-3x + 3y = 3$
$-5x + y = 13$

15) $6x + 6y = -6$
$5x + y = -13$

16) $2x + y = 20$
$6x - 5y = 12$

17) $-3x - 4y = 2$
$3x + 3y = -3$

18) $-2x + 6y = 6$
$-7x + 8y = -5$

19) $-5x - 8y = 17$
$2x - 7y = -17$

20) $-2x - y = -9$
$5x - 2y = 18$

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?