

## Algebra 3 Assignment # 7

Solve each systems of equations and check your answers:

(1)  $16x - 5y = 103$   
 $7x + 19y = -188$

(2)  $3s + t - 3 = 0$   
 $2s - 3t - 2 = 0$

(3)  $\frac{1}{4}x + \frac{1}{3}y = \frac{5}{12}$   
 $\frac{1}{2}x + y = 1$

(4)  $2(x - y - 1) = 1 - 2x$   
 $6(x - y) = 4 - 3(3y - x)$

(5)  $\frac{x-2}{5} + \frac{y+1}{10} = 1$   
 $\frac{x+2}{3} - \frac{y+3}{2} = 4$

(6) Points  $(-8, -16)$ ,  $(0, 10)$  and  $(12, 14)$  are three vertices of a parallelogram. Find the coordinates of the fourth vertex if it is located in the third quadrant

(7) A shopper pays \$3.82 for 9.5 pounds of vegetables consisting of potatoes and string beans. If potatoes cost .35 a pound and beans cost .68 per pound. How much of each was purchased?

(8) The tuition fee at a college plus room and board comes to \$8400 per year. The room and board is \$600 more than half the tuition. Find the cost of tuition and room and board individually.

(9) There are only nickels and quarters in a child's bank. There are 22 coins in the bank having a total value of \$3.90. How many of each are in the bank?

### Answers:

1.  $y=11$   $x=3$

2.  $s=1$   $t=0$

3.  $y=1/2$   $x=1$

4.  $y=7/18$   $x=11/18$

5.  $y=-4$   $x=8 \frac{1}{2}$

6.  $(-20, -20)$

7. Beans= 1.5 pounds Potatoes=7 pounds

8. Tution=\$5200 Room=\$3200

9. Quarters= 14 Nickels=8