Practice – Solving Systems by Substitution

Name ______ Period______

Find the solution for each system of linear equations.

1.
$$y = 2x$$

 $x + y = 12$

2.
$$y = 2x - 5$$

 $4x + y = 7$

3.
$$4y + x = 5$$

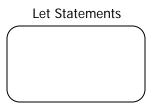
 $x + 4y = 10$

4. If
$$\begin{array}{l} -2x + 3y = 14 \\ x + 2y = 7 \end{array}$$
, then $x - y = ?$

5. The equations of two lines are 2x - 3y = 12 and x = 4y + 1. What is the value of x in the solution for this system of equations?

Find the solution for each system of linear equations.

8. Tyler is six years older than his sister, and the sum of their ages is 32. How old is Tyler? How old is his sister?



Answer (complete sentence):

9. What mistake was made in solving the following system of equations?

$$-3x + y = -4 3y = 15x + 6$$
 $y = 3x - 4$

Step 1: 3(3x - 4) = 15x + 6

Step 2: 9x - 12 = 15x + 6

Step 3: 6 = 24x

Step 4: $\frac{1}{4} = x$

10. Given the equations y - 3x = 8 and 3x = 2y + 7, what would you substitute for y in the equation 3x = 2y + 7?

A 8 - 3x

 $B \frac{8}{3}x$

C 8 + 3*x*

D 8•3*x*

A Did not solve for y correctly

B Did not distribute correctly in Step 1

C Should have subtracted 9x from 15x in Step 2

D No mistake was made