Practice – Solving Systems by Substitution

Name _____ Date _____ Period_____

Find the solution for each system of linear equations.

1. $\begin{array}{l} y = 2x \\ x + y = 12 \end{array}$

2. $\begin{array}{l} y = 2x - 5 \\ 4x + y = 7 \end{array}$

3. $\begin{array}{l} 4y + x = 5 \\ x + 4y = 10 \end{array}$

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?

Let Statements

Answer (complete sentence):

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

$\begin{array}{l} -3x + y = -4 \\ 3y = 15x + 6 \end{array} \longrightarrow y = 3x - 4$

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

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

Step 3: $6 = 24x$

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

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

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 $8 + 3x$
D $8 \bullet 3x$