

# SPARK Hybrid Education Center

## Mathematics | Week 2: Solving by Substitution | Upper Level

Name: \_\_\_\_\_ Date: \_\_\_\_\_

*Directions: Solve each problem. Show your work in the space provided. Circle your final answer.*

1. Solve:  $y = 2x$ ,  $x + y = 9$

2. Solve:  $y = x + 3$ ,  $2x + y = 12$

3. Solve:  $x = 4 - y$ ,  $3x + 2y = 10$

4. Solve:  $y = 3x - 2$ ,  $4x - y = 7$

5. Two numbers sum to 20; one is 4 more than the other. Find them.

6. Solve:  $y = 5 - x$ ,  $2x - y = 4$

7. Solve:  $x = 2y$ ,  $3x - 2y = 8$

8. A rectangle's perimeter is 28. Length = 2xwidth. Find dimensions.

--- Answer Key (Cut before distributing) ---

1. (3, 6)
2. (3, 6)
3. (2, 2)
4. (5, 13)
5. 8 and 12
6. (3, 2)
7. (4, 2)
8. Length=56/6≈9.3, Width≈4.7 (exact: l=28/3, w=14/3)

