Unit 2: Linear Equations and Systems

ADVANCED

Name: _____ Date: _____

Solve each problem. Show your work on scratch paper and write the exact answer as a number, fraction, or coordinate pair.

1. Solve for x: 5(2x - 3) - 4(x + 2) = 3x - 8

Answer: _____

2. Solve for x: (2x - 1)/3 - (x + 4)/5 = 2

Answer: _____

3. Solve the system by substitution: y = 3x - 7 and 2x + 5y = 16. Give the answer as (x, y).

Answer: _____

4. Solve the system by elimination: 4x + 3y = 10 and 5x - 2y = 24. Give the answer as (x, y).

Answer: _____

5. Solve for x: 0.25x + 1.5 = 0.1x + 3. Give the exact answer.

Answer: _____

6. How many solutions does this system have? 6x - 9y = 12 and 2x - 3y = 4. Answer with a number or the word infinite.

Answer: _____

7. Solve the system: (1/2)x + (1/3)y = 4 and (3/4)x - y = -3. Give the answer as (x, y).

Answer: _____

8. Solve for t: 7 - 2(3t - 4) = 4t + 5(1 - t). Give the exact answer.

Answer: _____

9. A line passes through the points (-2, 5) and (4, -7). What is the value of y when x = 6? Give a number.

Answer: _____

10. Solve the system: 3x + 4y = 1 and 9x + 12y = 7. If there is no solution, answer 'none'.

Answer: _____

11. The line 2x - 5y = 20 crosses the x-axis at point (a, 0) and the y-axis at point (0, b). What is the value of a + b?

Answer: _____