

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Score: \_\_\_\_ / 10

**INSTRUCTIONS**

For multiple-choice questions, circle the letter of the correct answer. For short-answer and problem-solving questions, show your complete work in the space provided. No calculator unless your teacher says otherwise.

**1 Solve by substitution:  $y = x + 2$  and  $3x + y = 14$** 

Multiple Choice

☐ **A**  $x = 3, y = 5$

☐ **B**  $x = 4, y = 6$

☐ **C**  $x = 3, y = 8$

☐ **D**  $x = 5, y = 7$

**2 Solve by elimination:  $2x + y = 7$  and  $x - y = 2$** 

Multiple Choice

☐ **A**  $x = 3, y = 1$

☐ **B**  $x = 1, y = 3$

☐ **C**  $x = 2, y = 3$

☐ **D**  $x = 3, y = 2$

**3 Short Answer — Solve the system:  $x + y = 6$  and  $x - y = 2$** 

Short Answer

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**4 What type of solution does the system  $2x - y = 4$  and  $4x - 2y = 8$  have?**

Multiple Choice

☐ **A** Infinitely many solutions☐ **B** No solution☐ **C** One solution:  $(2, 0)$ ☐ **D** One solution:  $(0, -4)$ **5 What type of solution does the system  $y = 2x + 1$  and  $y = 2x - 3$  have?**

Multiple Choice

☐ **A** No solution☐ **B** Infinitely many solutions☐ **C** One solution:  $(0, 1)$ ☐ **D** One solution:  $(2, 5)$ **6 Short Answer — Solve by elimination:  $3x + 2y = 16$  and  $x + y = 6$** 

Short Answer

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7

Which point is the solution of the system  $y = -x + 5$  and  $y = 3x - 3$ ?

Multiple Choice

☐ A (2, 3)☐ B (3, 2)☐ C (-2, 3)☐ D (2, -3)

8

A system of two linear equations has no solution. What must be true about the two lines?

Multiple Choice

☐ A Same slope, different y-intercept☐ B Different slopes☐ C Same slope, same y-intercept☐ D Perpendicular

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**Problem Solving** — A theater sells adult tickets for \$8 and child tickets for \$5. If 200 tickets were sold for a total of \$1,150, how many of each type were sold? Set up and solve a system of equations.

Problem Solving

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**Problem Solving** — The sum of two numbers is 24 and their difference is 6. Set up and solve a system of equations to find the two numbers.

Problem Solving