

Name \_\_\_\_\_

**Solve the system by the addition method. If there is no solution or an infinite number of solutions, so state.**

1)  $x + y = -2$   
 $x - y = -8$

2)  $x - 7y = 16$   
 $9x - 7y = 32$

3)  $x + 8y = 15$   
 $2x + 8y = 14$

4)  $x + 5y = 49$   
 $8x + 4y = 68$

5)  $x - 5y = -15$   
 $9x - 4y = -12$

6)  $5x + 9y = -6$   
 $2x - 2y = 20$

7)  $-6x - 7y = 7$   
 $4x - 3y = 3$

8)  $8x - 16 = 8y$   
 $-4x - 2y = -50$

9)  $2x + 8y = -42$   
 $12x + 4y = 56$

10)  $5x + \frac{3}{2}y = 46$   
 $3x - \frac{1}{2}y = 22$

11)  $\frac{1}{4}x + \frac{1}{4}y = 3$   
 $\frac{1}{2}x - \frac{1}{2}y = 2$

12)  $-3x + 2y = 4$   
 $-2x + 3y = 4$

13)  $\frac{x+2}{2} = \frac{y+18}{4}$   
 $\frac{x}{4} = \frac{2y+2}{8}$

$$\begin{aligned} 14) \quad x + y &= -8 \\ x + y &= -4 \end{aligned}$$

$$\begin{aligned} 15) \quad 8x - 9y &= 4 \\ 8x - 9y &= -9 \end{aligned}$$

$$\begin{aligned} 16) \quad 2x - 6y &= 8 \\ 4x - 12y &= 40 \end{aligned}$$

$$\begin{aligned} 17) \quad 9x - 7y &= 6 \\ -18x + 14y &= -18 \end{aligned}$$

$$\begin{aligned} 18) \quad 2x &= 6y + 8 \\ 2x &= 6y - 9 \end{aligned}$$

$$\begin{aligned} 19) \quad 6x + 4y &= 4 \\ 8y &= 8 - 12x \end{aligned}$$

$$\begin{aligned} 20) \quad 4x + y &= 14 \\ 16x + 4y &= 56 \end{aligned}$$

$$\begin{aligned} 21) \quad 3x + y &= 15 \\ 12x + 4y &= 60 \end{aligned}$$

**Solve the system by the best method.**

$$\begin{aligned} 22) \quad x + 3y &= 0 \\ x - 3y &= 18 \end{aligned}$$

$$\begin{aligned} 23) \quad x + y &= 4 \\ y &= -3x \end{aligned}$$

$$\begin{aligned} 24) \quad y &= 3x + 5 \\ 2x + y &= 5 \end{aligned}$$

$$\begin{aligned} 25) \quad 2x - 4y &= -28 \\ 8x + 6y &= 86 \end{aligned}$$

$$\begin{aligned} 26) \quad 5x + 4y &= 8 \\ 5x + 4y &= 9 \end{aligned}$$

$$\begin{aligned} 27) \quad x + 8y &= 20 \\ 3x + 7y &= 9 \end{aligned}$$

$$\begin{aligned} 28) \quad -5x &= -25 \\ x + 3y &= 8 \end{aligned}$$

$$\begin{aligned} 29) \quad 7x &= -74 - 5y \\ 4x + 2y &= -38 \end{aligned}$$

## Answer Key

Testname: 05.3V02

- 1)  $\{(-5, 3)\}$
- 2)  $\{(2, -2)\}$
- 3)  $\{(-1, 2)\}$
- 4)  $\{(4, 9)\}$
- 5)  $\{(0, 3)\}$
- 6)  $\{(6, -4)\}$
- 7)  $\{(0, -1)\}$
- 8)  $\{(9, 7)\}$
- 9)  $\{(7, -7)\}$
- 10)  $\{(8, 4)\}$
- 11)  $\{(8, 4)\}$
- 12)  $\left\{-\frac{4}{5}, \frac{4}{5}\right\}$
- 13)  $\{(13, 12)\}$
- 14) no solution;  $\emptyset$
- 15) no solution;  $\emptyset$
- 16) no solution;  $\emptyset$
- 17) no solution;  $\emptyset$
- 18) no solution;  $\emptyset$
- 19) infinite number of solutions;  $\{(x, y) \mid 6x + 4y = 4\}$  or  $\{(x, y) \mid 8y = 8 - 12x\}$
- 20) infinite number of solutions;  $\{(x, y) \mid 4x + y = 14\}$  or  $\{(x, y) \mid 16x + 4y = 56\}$
- 21) infinite number of solutions;  $\{(x, y) \mid 3x + y = 15\}$  or  $\{(x, y) \mid 12x + 4y = 60\}$
- 22)  $\{(9, -3)\}$
- 23)  $\{(-2, 6)\}$
- 24)  $\{(0, 5)\}$
- 25)  $\{(4, 9)\}$
- 26) no solution;  $\emptyset$
- 27)  $\{(-4, 3)\}$
- 28)  $\{(5, 1)\}$
- 29)  $\{(-7, -5)\}$