3.5 Solving Systems of Equations by Elimination Name_____

Solve by elimination.

1. $\begin{cases} x + y = 5 \\ x - y = 3 \end{cases}$

2. $\begin{cases} x + y = 9 \\ -x + y = 1 \end{cases}$

3. $\begin{cases} 2x + 3y = 1 \\ -x - 2y = 2 \end{cases}$

4. $\begin{cases} 3x + y = -1 \\ 2x - 2y = -14 \end{cases}$

Answers: **1.** {(4, 1)}; **3**. {(8, –5)}

Solve by elimination.

5. $\begin{cases} 3x-2y=2 \\ 5x-5y=10 \end{cases}$

6. $\begin{cases} 9x+3y=12 \\ 5x+4y=2 \end{cases}$

7. $\begin{cases} 2x+3y=2 \\ 4x-9y=-1 \end{cases}$

8. $\begin{cases} 3x+4y=1 \\ 18x-8y=14 \end{cases}$

Answers: **5**. $\{(-2,-4)\}$; **7.** $\left\{\left(\frac{1}{2},\frac{1}{3}\right)\right\}$

Solve by elimination.

9. $\begin{cases} 4x + 6y = 10 \\ 2x + 3y = -5 \end{cases}$

10. $\begin{cases} 5x + 4y = 10 \\ 10x + 8y = 6 \end{cases}$

11. $\begin{cases} 2x - 3y = 4 \\ -x + \frac{3}{2}y = -2 \end{cases}$

12. $\begin{cases} 6x - y = -8 \\ -9x + \frac{3}{2}y = 12 \end{cases}$

Answers: **9**. $\varnothing$; **11**. $\{(x, y) \mid 2x - 3y = 4\}$