

①  $1x + y = 5$   
 $+ 3x - y = 7$  Eliminate: y  
 $4x = 12$  Solve for x  
 $\frac{4x}{4} = \frac{12}{4}$   
 $x = 3$  Substitute to find other half of solution.  
 $(3, 2)$   
 $x + y = 5$   
 $3 + y = 5$   
 $y = 2$

⑥  $8 = 4x - 3y$   
 $+ 17 = 1x + 3y$  Eliminate: y  
 $25 = 5x$  Solve for x  
 $\frac{25}{5} = \frac{5x}{5}$   
 $5 = x$  Substitute (half)  
 $8 = 4x - 3y$   
 $8 = 4(5) - 3y$   
 $8 = 20 - 3y$   
 $-12 = -3y$   
 $\frac{-12}{-3} = \frac{-3y}{-3}$   
 $4 = y$   
 $(5, 4)$

②  $2x + y = 3$   
 $+ -2x + 5y = -9$  Eliminate: x  
 $6y = -6$  solve for y  
 $\frac{6y}{6} = \frac{-6}{6}$   
 $y = -1$   
 $2x + y = 3$   
 $2x + (-1) = 3$   
 $2x - 1 = 3$   
 $2x = 4$   
 $x = 2$   
 $(2, -1)$

⑦  $-6 = 3x + y$   
 $+ 10 = -5x - y$  Eliminate: y  
 $4 = -2x$  solve for x  
 $\frac{4}{-2} = \frac{-2x}{-2}$   
 $-2 = x$   
 $-6 = 3x + y$   
 $-6 = 3(-2) + y$   
 $-6 = -6 + y$   
 $0 = y$   
 $(-2, 0)$

③  $3x + 5y = 0$   
 $+ 2x - 5y = -25$  Eliminate: y  
 $5x = -25$  solve for x  
 $\frac{5x}{5} = \frac{-25}{5}$   
 $x = -5$   
 $3x + 5y = 0$   
 $3(-5) + 5y = 0$   
 $-15 + 5y = 0$   
 $+15 +15$   
 $5y = 15$   
 $y = 3$   
 $(-5, 3)$

⑨  $x + 2y = 15 \rightarrow 1x + 2y = 15$   
 $5x = 2y + 3 \rightarrow 5x - 2y = 3$  Eliminate: y  
 $6x = 18$  solve for x  
 $\frac{6x}{6} = \frac{18}{6}$   
 $x = 3$   
 $x + 2y = 15$   
 $3 + 2y = 15$   
 $-3 -3$   
 $2y = 12$   
 $\frac{2y}{2} = \frac{12}{2}$   
 $y = 6$   
 $(3, 6)$

④  $-4x - y = -6$   
 $+ 4x + 3y = 18$  Eliminate: x  
 $2y = 12$  solve for y  
 $\frac{2y}{2} = \frac{12}{2}$   
 $y = 6$   
 $4x + 3y = 18$   
 $4x + 3(6) = 18$   
 $4x + 18 = 18$   
 $4x - 18 = -18$   
 $4x = 0$   
 $\frac{4x}{4} = \frac{0}{4}$   
 $x = 0$   
 $(0, 6)$

⑩  $7x - y = 12 \rightarrow 7x - y = 12$   
 $-3y = 7x + 8 \rightarrow -7x - 3y = 8$  Eliminate: x  
 $-4y = 20$  solve for y  
 $\frac{-4y}{-4} = \frac{20}{-4}$   
 $y = -5$   
 $7x - y = 12$   
 $7x - (-5) = 12$   
 $7x + 5 = 12$   
 $-5 -5$   
 $7x = 7$   
 $\frac{7x}{7} = \frac{7}{7}$   
 $x = 1$   
 $(1, -5)$

Extra Answers:

- ⑤ (-3, -1)
- ⑧ (5, -2)
- ⑫ (4, -4)
- ⑪ (-4, 1)