

Solving Systems of Equations

By Substitution

$$c + d = 10 \quad \leftarrow$$

$$5c + 6d = 56 \quad \leftarrow$$

$$c = 10 - d$$

$$5(10 - d) + 6d = 56$$

$$\underline{50} - \underline{5d} + \underline{6d} = 56$$

$$d = 56 - 50$$

$$\boxed{d = 6} \quad \leftarrow$$

$$c + 6 = 10$$

$$\boxed{\begin{array}{l} c = 10 - 6 \\ \quad = 4 \end{array}}$$

By Elimination

$$c + d = 10 \quad \textcircled{1}$$

$$5c + 6d = 56 \quad \textcircled{2}$$

$$- (5c + 5d = 50) \quad \textcircled{1} \times 5$$

$$\underline{0} \quad d = 6$$

$$c + 6 = 10$$

$$c = 4$$

$$6c + 6d = 60 \quad \textcircled{1} \times 6$$

$$- (5c + 6d = 56) \quad \textcircled{2}$$

$$\underline{c} \quad \underline{+0} = \underline{4}$$

$$c = 4$$

$$c + d = 10$$

$$5(c + d = 10)$$

$$\underline{5c + 5d = 5 \cdot 10} \\ = 50$$

