**Lesson 10**

**GCSE Mathematics**

**Simultaneous Equations I**

## 10.1 All Change

To solve these pairs of simultaneous equations;

FIRST : Change **BOTH** of the equations to obtain identical terms,

SECOND : If the identical terms have opposite signs, combine by **ADDITION**.

If the identical terms have same signs, combine by **SUBTRACTION**.

## 10.2 Exercise

Marks Available : 60

### Question 1

$$\left.\begin{aligned} 5x + 2y &= 20 \\ 4x + 3y &= 23 \end{aligned}\right\}$$

**[ 5 marks ]**

### Question 2

$$\left.\begin{aligned} 3x + 4y &= 25 \\ 2x + 3y &= 18 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 3**

$$\left.\begin{aligned} 10x - 2y &= 2 \\ 4x + 3y &= 16 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 4**

$$\left.\begin{aligned} 3x + 2y &= 22 \\ 4x - 3y &= 18 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 5**

$$\left.\begin{aligned} 3x + 2y &= 27 \\ 4x + 5y &= 43 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 6**

$$\left.\begin{aligned} 5x - 3y &= 11 \\ 2x + 4y &= 20 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 7**

$$\left.\begin{aligned} 2x + 5y &= 15 \\ 3x - 2y &= 13 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 8**

$$\left.\begin{aligned} 2x + 3y &= 30 \\ 5x + 7y &= 71 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 9**

$$\left.\begin{aligned} 2x - 3y &= 15 \\ 5x + 7y &= 52 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 10**

$$\left.\begin{aligned} 3x - 2y &= 15 \\ 2x - 3y &= 5 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 11**

$$\left.\begin{aligned} 5x - 3y &= 14 \\ 4x - 5y &= 6 \end{aligned}\right\}$$

**[ 5 marks ]**

**Question 12**

$$\left.\begin{aligned} 3x + 2y &= 28 \\ 2x + 7y &= 47 \end{aligned}\right\}$$

**[ 5 marks ]**