

## 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

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

[ 5 marks ]

##### Question 2

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

[ 5 marks ]

**Question 3**

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

**[ 5 marks ]****Question 4**

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

**[ 5 marks ]****Question 5**

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

**[ 5 marks ]**

**Question 6**

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

[ 5 marks ]

**Question 7**

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

[ 5 marks ]

**Question 8**

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

[ 5 marks ]

**Question 9**

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

[ 5 marks ]

**Question 10**

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

[ 5 marks ]

**Question 11**

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

[ 5 marks ]

**Question 12**

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

**[ 5 marks ]**

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Teachers may obtain detailed worked solutions to the exercises by email from [mhh@shrewsbury.org.uk](mailto:mhh@shrewsbury.org.uk)