

Lesson 8

GCSE Mathematics Simultaneous Equations I

8.1 Adjust and Subtract

To solve these pairs of simultaneous equations;

FIRST : Change one of the equations to obtain identical terms and with same signs.

SECOND : Eliminate the identical terms by **SUBTRACTION**.

8.2 Exercise

Marks Available : 36

Question 1

$$\left. \begin{array}{l} 5y + 4x = 33 \\ 2y + 2x = 14 \end{array} \right\}$$

[4 marks]

Question 2

$$\left. \begin{array}{l} 7y + 9x = 50 \\ 2y + 3x = 16 \end{array} \right\}$$

[4 marks]

Question 3

$$\left. \begin{array}{l} 6y + 11x = 9 \\ 3y + 3x = -3 \end{array} \right\}$$

Be careful !

$$(9) - (-6) = 15$$

[4 marks]

Question 4

$$\left. \begin{array}{l} 4y + 7x = -14 \\ 2y + 3x = -8 \end{array} \right\}$$

Be careful !

$$(-14) - (-16) = \underline{\quad}$$

[4 marks]

Question 5

$$\left. \begin{array}{l} 5y + 6x = 26 \\ 10y + 7x = 22 \end{array} \right\}$$

[4 marks]

Question 6

$$\left. \begin{array}{l} 3y + 4x = 8 \\ 12y + 5x = 43 \end{array} \right\}$$

[4 marks]

Question 7

$$\left. \begin{array}{l} 2y + 7x = 17 \\ 8y + 9x = 11 \end{array} \right\}$$

[4 marks]

Question 8

$$\left. \begin{array}{l} 5y + 3x = 14 \\ 2y + 6x = -4 \end{array} \right\}$$

[4 marks]

Question 9

$$\left. \begin{array}{l} 12y + 11x = 104 \\ 3y + 2x = 23 \end{array} \right\}$$

[4 marks]

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Teachers may obtain detailed worked solutions to the exercises by email from mhh@shrewsbury.org.uk