

Topic 12 Simultaneous Equations (Post-TT) [31]

1.

Solve these simultaneous equations

$$x + 3.6y = 2$$

$$x - 2.4y = 5$$

You **must** show all your working.
Do **not** use trial and improvement.

(Total 3 marks)

2.

Solve the simultaneous equations

$$4x + 3y = 5$$

$$2x - 5y = 9$$

You **must** show your working.
Do **not** use trial and improvement.

(Total 4 marks)

3.

By drawing the graphs of $3x + 4y = 12$ and $y = 2x - 4$ on the same set of axes for $0 \leq x \leq 5$, work out an approximate solution to the simultaneous equations $3x + 4y = 12$ and $y = 2x - 4$.

(Total 6 marks)

4.

Solve the simultaneous equations

$$5x + 3y = 13$$

$$3x + 5y = 3$$

You **must** show your working.
Do **not** use trial and improvement.

(Total 4 marks)

5.

Solve the simultaneous equations

$$2x - 4y = 19$$

$$3x + 5y = 1$$

(Total 4 marks)

Questions 6 and 7 are continued overleaf

6.

SUPERGROW GARDEN CENTRE

ROSES
£ x each

SHRUBS
£ y each

- (a) Megan buys 4 roses and 3 shrubs.
She pays £33.

Use this information to write down an equation in x and y .

(1)

- (b) Josh buys 6 roses and 6 shrubs.
He pays £57.

Use this information to write down another equation in x and y .

(1)

- (c) Solve your equations simultaneously to find the values of x and y .
You **must** show your working.
Do **not** use trial and improvement.

(3)

(Total 5 marks)

7. **Non-calculator**

Danny sells pens and notebooks in his shop.
On Monday, he sold 5 pens and 8 notebooks for £44.50.
On Tuesday, he sold 10 pens and 3 notebooks for £37.

Work out the cost of a pen and the cost of a notebook.

(Total 5 marks)