

A218 Simultaneous equations 2

Q1.

Solve algebraically the simultaneous equations

$$\begin{aligned}x^2 + y^2 &= 25 \\ y - 2x &= 5\end{aligned}$$

.....
(Total for question = 5 marks)

Q2.

Solve algebraically

$$x^2 + y^2 = 18$$

$$x - 2y = -3$$

(Total for question = 5 marks)

Q3.

Solve algebraically the simultaneous equations

$$\begin{aligned}x^2 + y^2 &= 25 \\ y - 3x &= 13\end{aligned}$$

.....
(Total for question = 5 marks)

Q4.

Solve algebraically the simultaneous equations

$$2x^2 - y^2 = 17$$

$$x + 2y = 1$$

(Total for question = 5 marks)

Q5.

Solve the simultaneous equations

$$y = 2x^2$$

$$y = 20 - 3x$$

Show clear algebraic working.

.....
(Total for question = 5 marks)

Q6.

Solve the simultaneous equations

$$x^2 + y^2 = 26$$

$$y = 3 - 2x$$

Show clear algebraic working.

.....
(Total for question = 6 marks)

Q7.

Solve the simultaneous equations

$$\begin{aligned}y^2 + 4x &= 12 \\2x + 3y &= 10\end{aligned}$$

Show clear algebraic working.

.....
(Total for question = 6 marks)

Q8.

The line with equation $y = x + 2$ intersects the curve with equation $x^2 + y^2 - 2y = 24$ at the points A and B .

Find the coordinates of A and B .

Show clear algebraic working.

(..... ,)

(..... ,)

(Total for question = 5 marks)

Q9.

The equation of the line **L** is $y = 9 - x$

The equation of the curve **C** is $x^2 - 3xy + 2y^2 = 0$

L and **C** intersect at two points.

Find the coordinates of these two points.

Show clear algebraic working.

(..... ,) and (..... ,)

(Total for question = 5 marks)