

1MA1 Higher themed papers: Simultaneous equations

Write your name here						
Surname	Other names					
Pearson Edexcel Level 1/Level 2 GCSE (9–1)	Centre Number <table border="1"><tr><td></td><td></td><td></td><td></td><td></td></tr></table>					
	Candidate Number <table border="1"><tr><td></td><td></td><td></td><td></td><td></td></tr></table>					
Mathematics Simultaneous equations						
	Paper Reference 1MA1					
You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.						
Total Marks						

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Information

- The total mark for this paper is **42**. There are **10** questions.
- Questions have been arranged in an ascending order of mean difficulty, as found by all students in the June 2017–November 2019 examinations.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

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- 1 Solve the simultaneous equations

$$3x + y = -4$$

$$3x - 4y = 6$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question 1 is 3 marks)

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2 Solve the simultaneous equations

$$3x - 2y = -5$$

$$2x - 4y = 2$$

$x =$

$y =$

(Total for Question 2 is 3 marks)

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3 Solve the simultaneous equations

$$5x + y = 21$$

$$x - 3y = 9$$

$x =$

$y =$

(Total for Question 3 is 3 marks)

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4 Solve the simultaneous equations

$$2x + 3y = 6$$

$$7x - 2y = 1$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question 4 is 4 marks)

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- 5 Solve the simultaneous equations

$$4x + 6y = 5$$

$$7x + 5y = -10.5$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question 5 is 4 marks)

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6 Solve algebraically the simultaneous equations

$$x^2 + y^2 = 25$$

$$y - 3x = 13$$

.....
(Total for Question 6 is 5 marks)

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- 7 Solve algebraically the simultaneous equations

$$x^2 - 4y^2 = 9$$

$$3x + 4y = 7$$

(Total for Question 7 is 5 marks)

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8 Solve algebraically

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

$$x - 2y = -3$$

.....
(Total for Question 8 is 5 marks)

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- 9 Solve algebraically the simultaneous equations

$$\begin{aligned}2x^2 - y^2 &= 17 \\ x + 2y &= 1\end{aligned}$$

.....
(Total for Question 9 is 5 marks)

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- 10** Solve algebraically the simultaneous equations

$$y = 2x^2 - 3x - 10$$

$$2x - y = -2$$

.....
(Total for Question 10 is 5 marks)

TOTAL MARKS FOR PAPER: 42