Write your name here

Surname		Other names

Centre Number

Candidate Number

Mathematics

Simultaneous Equations

Higher Tier

GCSE style questions arranged by topic

Paper Reference
1MA0/2H

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator.

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*.
- **Calculators may be used.**
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out**.

Information

- The total mark for this paper is 80
- 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.

Turn over ▶

1 Solve the simultaneous equations

$$3x + 2y = 8$$
$$2x + 5y = -2$$

$x =$ ....

$y =$ ....

(Total for Question 1 is 4 marks)

2 Solve the simultaneous equations

$$6x + 2y = -3$$
$$4x - 3y = 11$$

$x =$ ...., $y =$ ....

(Total for Question 2 is 4 marks)

3 Solve the simultaneous equations

$x^2 + y^2 = 5$
$y = 3x + 1$

$x = $ .... $y = $ ....

or $x = $ .... $y = $ ....

(Total for Question 3 is 6 marks)

4 Solve the simultaneous equations

$4x + y = -1$
$4x - 3y = 7$

$x =$ .... $y =$ ....

(Total for Question 4 is 3 marks)

5
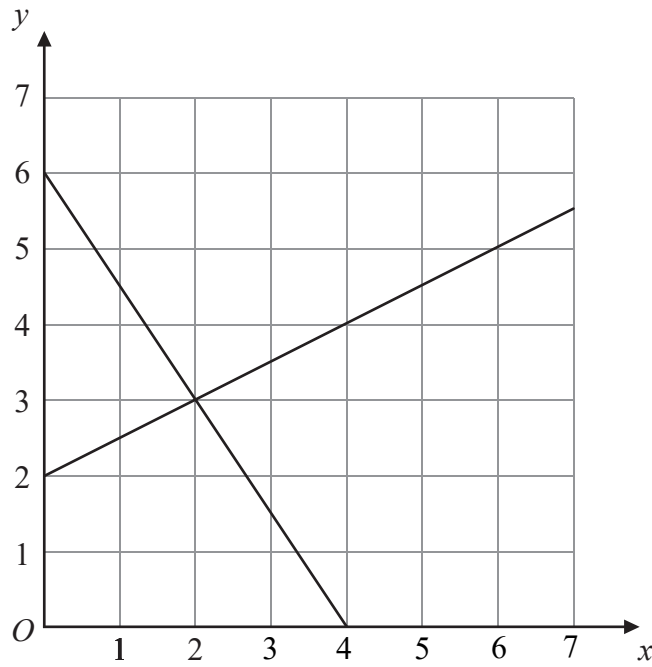
The diagram shows graphs of $\quad y = \dfrac{1}{2}x + 2$

and $\qquad\qquad\qquad\qquad 2y + 3x = 12$

(a) Use the diagram to solve the simultaneous equations

$$y = \dfrac{1}{2}x + 2$$

$$2y + 3x = 12$$

$x =$ .... $y =$ ....

(1)

(b) Find an equation of the straight line which is parallel to the line $\quad y = \dfrac{1}{2}x + 2$ and passes through the point (0, 4).

.... **(2)**

(Total for Question 5 is 3 marks)

6 Solve the simultaneous equations

$$6x + 2y = -3$$
$$4x - 3y = 11$$

$x = $ ...., $y = $ ....

(Total for Question 6 is 4 marks)

7 Solve the simultaneous equations

$$4x + y = 10$$
$$2x - 3y = 19$$

$x = $ ....

$y = $ ....

(Total for Question 7 is 3 marks)