

Name:

Date:

Quadratic Simultaneous Equations

GCSE

Edexcel
Mathematics
Grade (9-1)

Mark

Score (%)

— 45

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Materials

For this paper you must have:

- Ruler
- Pencil, Rubber, Protractor and Compass
- Scientific calculator, which you are expected to use when appropriate

Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown
- Do all rough work in this book. Cross out any rough work you don't want to be marked

Information

- The marks for the questions are shown in brackets

1 Solve the simultaneous equations

$$x^2 + y^2 = 34$$

$$x = y + 2$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(Total 4 marks)

2 Solve the simultaneous equations

$$x^2 + y^2 = 13$$

$$x = y - 5$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(Total 4 marks)

3 Solve the simultaneous equations

$$xy = 24$$

$$x = y - 2$$

Leave
blank

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

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

(Total 4 marks)

4 Solve the simultaneous equations

$$x^2 + y^2 = 17$$

$$3 = x - y$$

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

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

(Total 4 marks)

5 Solve the simultaneous equations

$$2e - f = 7$$

$$ef = 15$$

$$e = \dots\dots\dots$$

$$f = \dots\dots\dots$$

(Total 5 marks)

- 6 Solve the simultaneous equations
Give your answers to 3 significant figures

$$a^2 + b^2 = 20$$

$$2a + b = 3$$

$$a = \dots\dots\dots$$

$$b = \dots\dots\dots$$

(Total 5 marks)

7 Solve the simultaneous equations

$$c^2 + d^2 = 17$$

$$c + 4d = 0$$

$$c = \dots\dots\dots$$

$$d = \dots\dots\dots$$

(Total 4 marks)

8 Solve the simultaneous equations

$$x + 2y = 3$$

$$x^2 + 3xy = 10$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(Total 5 marks)

- 9 Solve the simultaneous equations
Give your answers to 3 significant figures

$$m^2 + n^2 = 27$$

$$2m - n = 3$$

$$m = \dots\dots\dots$$

$$n = \dots\dots\dots$$

(Total 5 marks)

- 10** Solve the simultaneous equations
Give your answers to 1 decimal place.

$$x^2 + y^2 = 45$$

$$5x - 3y = 21$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(Total 5 marks)