Name: _____

GCSE (1 – 9)

Quadratic Simultaneous Equations

Instructions

• Use **black** ink or ball-point pen.
• Answer all questions.
• Answer the questions in the spaces provided
– *there may be more space than you need.*
• Diagrams are **NOT** accurately drawn, unless otherwise indicated.
• You must **show all your working out.**

Information

• 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

1 Solve the simultaneous equations

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

$$x = y - 5$$

$x =$ ….....

$y =$ ….....

(Total for question 1 is 5 marks)

2 Solve the simultaneous equations

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

$$y = x - 3$$

$x =$ ….....

$y =$ ….....

(Total for question 2 is 5 marks)

3 Solve the simultaneous equations

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

$$x - y = 2$$

$x =$ ….....

$y =$ ….....

(Total for question 3 is 5 marks)

4 Solve the simultaneous equations

$$x^2 + y^2 = 20$$
$$3x = 2 - y$$

$x =$ ….....

$y =$ ….....

(Total for question 4 is 5 marks)

5 Solve the simultaneous equations

$$x^2 + y^2 = 41$$
$$y = 2x - 3$$

$x =$ ….....

$y =$ ….....

(Total for question 5 is 5 marks)

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

$$x^2 + y^2 = 20$$

$$2x + y = 3$$

$x =$ ……

$y =$ ……

(Total for question 6 is 5 marks)

7 Solve the simultaneous equations
Give your answers to 3 significant figures

$$x^2 + y^2 = 27$$
$$2x - y = 3$$

$x =$ ……

$y =$ ……

(Total for question 7 is 5 marks)

8 Solve algebraically the simultaneous equations

$$x^2 - 3y^2 = 13$$
$$2x + 3y = 4$$

.....

(Total for question 9 is 5 marks)

9 Solve algebraically the simultaneous equations

$$2x^2 - y^2 = 14$$
$$3x + 2y = 3$$

.....

(Total for question 8 is 5 marks)