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)
Solve the simultaneous equations

\[ x^2 + y^2 = 17 \]
\[ y = x - 3 \]

\[ x = \ldots \]
\[ y = \ldots \]

(Total for question 2 is 5 marks)
3 Solve the simultaneous equations

\[ x^2 + y^2 = 34 \]
\[ x - y = 2 \]

\[ x = \ldots \]
\[ y = \ldots \]
Solve the simultaneous equations

\[ x^2 + y^2 = 20 \]
\[ 3x = 2 - y \]

\[ x = \ldots \]
\[ y = \ldots \]

(Total for question 4 is 5 marks)
Solve the simultaneous equations

\[ x^2 + y^2 = 41 \]
\[ y = 2x - 3 \]

\[ x = \ldots \]
\[ y = \ldots \]

(Total for question 5 is 5 marks)
Solve the simultaneous equations
Give your answers to 3 significant figures

\[ x^2 + y^2 = 20 \]
\[ 2x + y = 3 \]

\[ x = \ldots \]
\[ y = \ldots \]

(Total for question 6 is 5 marks)
Solve the simultaneous equations
Give your answers to 3 significant figures

\[ x^2 + y^2 = 27 \]
\[ 2x - y = 3 \]

\[ x = \ldots \]
\[ y = \ldots \]

(Total for question 7 is 5 marks)