

Examination Practice Questions

You should have:

A ruler, protractor, compasses, a pen, pencil, eraser, calculator.
For some questions, you may need tracing paper.

Instructions

- Use **black** ink or ball-point pen.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may be used.**

Information

- The marks for each question are shown in brackets.
- Use the number of marks for each question as a guide as to how much time to spend on each question. As a rough guide, you can multiply the number of marks by 1.2 to see how many minutes you should spend on a question.
- Questions been carefully compiled from or modelled on a variety of past papers and will generally get more challenging as the document progresses. Some of the later questions will go beyond the core grade level for this topic.

Advice

- Read each question carefully before you start to answer it.
- Don't forget to have fun.
- Check your answers at the end.

Q1.

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Solve the following simultaneous equations.

$$\begin{aligned}2x + y &= 8 \\ x - y &= 1\end{aligned}$$

.....
(2 marks)

Q2.

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Solve the simultaneous equations.

$$\begin{aligned}3x + y &= 11 \\ x + y &= 3\end{aligned}$$

.....
(2 marks)

Q3.

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Solve the simultaneous equations.

$$\begin{aligned}5x + y &= 17 \\ x + y &= 3\end{aligned}$$

Show clear algebraic working.

.....
(2 marks)

Q4.

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Solve the simultaneous equations.

$$2x - y = 7$$

$$2x + y = 5$$

.....
(2 marks)

Q5.

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Solve

$$7x + 2y = 16$$

$$5x - 2y = 20$$

.....
(3 marks)

Q6.

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Solve the simultaneous equations

$$3a + 2b = 1$$

$$a + 2b = 5$$

.....
(3 marks)

Q7.

Solve the simultaneous equations

$$\begin{aligned}3x + 5y &= 6 \\7x - 5y &= -11\end{aligned}$$

.....
(3 marks)

Q8.

Solve the simultaneous equations

$$\begin{aligned}5x + 2y &= 27 \\6x + 4y &= 28\end{aligned}$$

.....
(3 marks)

Q9.

Solve the simultaneous equations

$$x + 2y = 3$$

$$x - y = 6$$

.....
(3 marks)

Q10.

Solve

$$2x - 3y = 3$$

$$3x + 6y = 1$$

.....
(3 marks)

Solve the simultaneous equations

$$\begin{aligned}4x + 5y &= 4 \\ 2x - y &= 9\end{aligned}$$

.....
(3 marks)

Solve the simultaneous equations

$$\begin{aligned}3x + 5y &= 3.1 \\ 6x + 3y &= 3.75\end{aligned}$$

Show clear algebraic working.

.....
(3 marks)

Q13.

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Solve the simultaneous equations $5x + 2y = 19$ and $4x - 3y = 29$

.....
(4 marks)

Q14.

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Solve the simultaneous equations

$$\begin{aligned}7x - 2y &= 34 \\3x + 5y &= -3\end{aligned}$$

.....
(4 marks)

Solve the simultaneous equations

$$2x + 7y = 17$$

$$5x + 3y = -1$$

.....
(4 marks)

Solve the following simultaneous equations using an algebraic method.

$$5x + 3y = 11$$

$$2x - 7y = 29$$

.....
(4 marks)

Solve the simultaneous equations

$$4x + 5y = 13$$

$$3x - 2y = 27$$

.....
(4 marks)

Solve the following simultaneous equations using an algebraic method.

$$4x - 3y = 2$$

$$6x - 5y = 1$$

.....
(4 marks)

Solve the simultaneous equations

$$7x + 2y = 5.5$$

$$3x - 5y = 17$$

.....
(4 marks)

Solve the simultaneous equations

$$y = 2x$$

$$4x - 5y = 9$$

.....
(3 marks)

Solve, by substitution, the simultaneous equations

$$c + 5d = -13$$

$$4c - 5d = 48$$

.....
(3 marks)

Solve, by substitution, the simultaneous equations

$$x + 2y = -0.5$$

$$3x - y = 16$$

.....
(3 marks)

Solve, by substitution, the simultaneous equations

$$\begin{aligned}x + y &= 15 \\7x - 5y &= 3\end{aligned}$$

.....
(3 marks)