

N5

National Qualifications

2026

Mathematics

Paper 1 (Non-calculator)

Friday, 8 May

Instructions to Candidates

Candidates should enter their surname, forename(s), date of birth, Scottish candidate number and the name and level of the subject at the top of their first answer sheet.

Total marks – 40

Attempt ALL Questions

You must NOT use a calculator.

To earn full marks you must show your working in your answers.

State the units for your answer where appropriate.

Questions marked with an asterisk differ in some respects from those in the printed paper.

Write your answers clearly on your answer sheet.

You must clearly identify the question number you are attempting on your answer sheet.

Marks are shown in square brackets at the end of each question or part question.

An **ow** in the margin indicates a new question.

[Braille page 2] Tactile diagrams are produced in a separately bound booklet.

A separate formula sheet is provided.

[Braille page 3] Total marks — 40

Attempt ALL questions

ow 1. Expand and simplify

$$(y+4)(y^2-3y+2). \text{ [3 marks]}$$

ow 2. An electric car shows that it has enough charge remaining in its battery to travel 180 miles.

The battery has 60% of its charge remaining.

Calculate the number of miles the car can travel when the battery is fully charged.
[3 marks]

ow 3. A restaurant recorded the waiting times to be seated from a sample of its customers.

The waiting times, in minutes, of ten customers were:

2 20 5 14 2 4 8 18 6 15

(a) Calculate the median and interquartile range of the waiting times. [3 marks]

A café also recorded the waiting times to be seated from a sample of its customers.

The median waiting time at the café was 5 minutes and the interquartile range was 12 minutes.

(b) Make two valid comments comparing the waiting times at the restaurant **[Braille page 4]** and at the café. [2 marks]

ow 4. Solve, algebraically, the inequation

$$x+8 < 3(x-2)+20. \text{ [3 marks]}$$

ow 5. Sam walked $2\frac{3}{4}$ miles to a park and then walked a further $1\frac{2}{3}$ miles to a shop.

Calculate the total distance Sam walked. [2 marks]

[Braille page 5] ow * 6. Refer to the diagram for Question 6. A teacher records the marks scored by the pupils in her class for the prelim exam and the final exam.

The scattergraph shows the relationship between the marks scored in the prelim exam, P, and the final exam, F.

A line of best fit is drawn.

Point A represents a pupil who scored 30 in the prelim exam and 54 in the final exam.

Point B represents a pupil who scored 90 in the prelim exam and 94 in the final exam.

(a) Find the equation of the line of best fit in terms of F and P.

Give the equation in its simplest form. [3 marks]

ow 6.

A pupil scored 33 marks in the prelim exam.

(b) Use your equation from part (a) to estimate their mark in the final exam. [1 mark]

ow 7. Find $|\mathbf{d}|$, the magnitude of vector

$$\mathbf{d} = \begin{pmatrix} 4 \\ -5 \\ 7 \end{pmatrix}.$$

Express your answer as a surd in its simplest form. [3 marks]

ow 8. Change the subject of the following formula to T.

$$P = \sqrt{T - 3L} \quad [2 \text{ marks}]$$

ow 9. Refer to the diagram for Question 9. The diagram shows part of the graph of $y = kx^2$.

Find the value of k. [2 marks]

ow 10. Refer to the diagram for Question 10. The diagram shows a circle with centre O.

- DE is a tangent to the circle at the point B.
- Angle OBC is 40° .
- Angle ABE is 63° .

[Braille page 6] Calculate the size of the **reflex** angle AOC. [3 marks]

State your final answer below.

Reflex angle AOC =

ow * 11. Given

$$\mathbf{u} = \begin{pmatrix} 12 \\ -2 \\ 5 \end{pmatrix} \text{ and } \mathbf{v} = \begin{pmatrix} 0 \\ 8 \\ 6 \end{pmatrix}.$$

Find the resultant vector

$$\mathbf{u} - \frac{1}{2} \mathbf{v}. \text{ [2 marks]}$$

ow * 12. Describe the graph of $y = (x+2)^2+3$. Make sure you describe the shape of the graph and state the coordinates of the turning point and the point of intersection with the y-axis. [3 marks]

ow 13. Given that $f(x) = 5\cos 2x^\circ$, evaluate $f(90)$. [2 marks]

ow 14. Solve the equation **by factorising**

$$10x^2+11x-6 = 0. \text{ [3 marks]}$$

[END OF QUESTION PAPER]