

MATHEMATICS TEST

GRADE 8 · TERM 3 · 2026

Data Handling · Geometry of Straight Lines · Geometry of 2D Shapes

TOTAL: 50 MARKS

DURATION: 1 HOUR

EXAMINER: MR SIMONS

Name:		Surname:	
Grade / Class:		Date:	

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO sections:

SECTION A: 8 multiple-choice questions (8 marks)

SECTION B: 3 questions (42 marks)

2. Answer ALL the questions.
3. Answer SECTION A by writing only the LETTER (A–D) of the correct answer next to the question number, for example 1.1 D.
4. Show ALL your working in SECTION B. Answers only will NOT necessarily be awarded full marks.
5. Give reasons for all geometric statements where they are asked for.
6. A non-programmable, non-graphical calculator may be used, unless stated otherwise.
7. Diagrams are NOT necessarily drawn to scale.
8. The question paper must be handed in separately. DO NOT attach it to your answer book.
9. Write neatly and legibly.

SECTION A: MULTIPLE-CHOICE QUESTIONS [8 MARKS]

Write down only the letter of the correct answer.

QUESTION 1

- 1.1 The size of EACH interior angle of an equilateral triangle is ... (1)
- A 30°
B 45°
C 60°
D 90°
- 1.2 A triangle with NO two sides equal is called ... (1)
- A an equilateral triangle
B an isosceles triangle
C a right-angled triangle
D a scalene triangle
- 1.3 A quadrilateral with exactly ONE pair of parallel sides is a ... (1)
- A parallelogram
B trapezium
C rhombus
D kite
- 1.4 The angles around a point add up to ... (1)
- A 90°
B 180°
C 270°
D 360°

- 1.5 Two straight lines that cut each other at 90° are ... (1)
- A parallel
 - B alternate
 - C corresponding
 - D perpendicular
- 1.6 The favourite colour of each learner in a class is an example of ... (1)
- A discrete data
 - B continuous data
 - C categorical data
 - D grouped data
- 1.7 The highest and the lowest values in a data set are called the ... (1)
- A mode
 - B extremes
 - C mean
 - D median
- 1.8 Which measure is MOST affected by one very large value in a data set? (1)
- A the mean
 - B the median
 - C the mode
 - D the range

SECTION B [42 MARKS]**QUESTION 2: DATA HANDLING [16]**

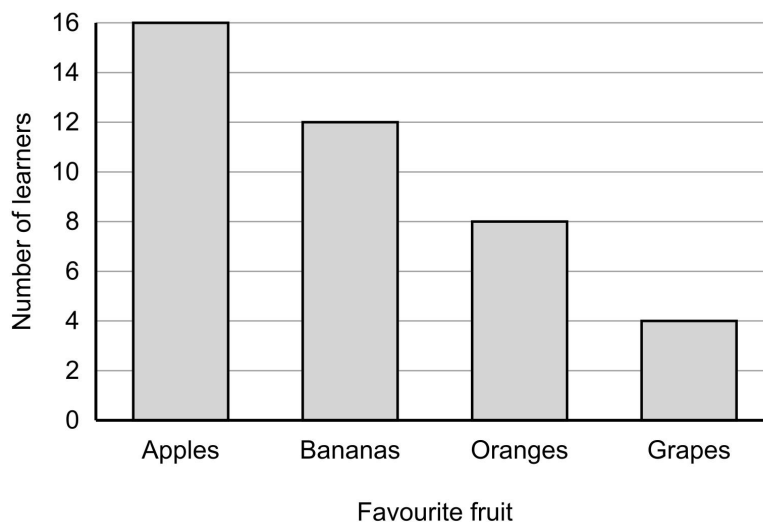
2.1 The Mathematics marks (out of 60) of a group of Grade 8 learners are shown in the stem-and-leaf display below.

Stem	Leaf
2	4 7 9
3	1 5 5 8
4	0 2 2 2 6 9
5	3 4

Key: 2 | 4 means 24

- 2.1.1 How many learners wrote the test? (1)
- 2.1.2 Write down the MODE of the marks. (1)
- 2.1.3 Determine the MEDIAN of the marks. (2)
- 2.1.4 Calculate the RANGE of the marks. (2)

2.2 The bar graph below shows the favourite fruit of the learners in a Grade 8 class.



- 2.2.1 Which fruit was chosen by the FEWEST learners? (1)
- 2.2.2 How many learners are there in the class altogether? (2)
- 2.2.3 There are 200 learners in Grade 8 at the school. If the whole grade has the same taste in fruit as this class, how many of the 200 learners would choose apples? Show ALL your working. (3)

2.3 The table below shows the time (in minutes) that 30 learners spent on their homework.

Time (minutes)	0 – 9	10 – 19	20 – 29	30 – 39	Total
Number of learners	4	9	(a)	7	30

- 2.3.1 Calculate the value of (a). (1)
- 2.3.2 Write down the modal interval. (1)

2.4 Mr Simons wants to find out how all 850 learners at the school travel to school. He asks only the 32 learners in his own class.

- 2.4.1 Are the 32 learners a SAMPLE or the POPULATION? (1)
- 2.4.2 Give ONE reason why his results may NOT be reliable. (1)

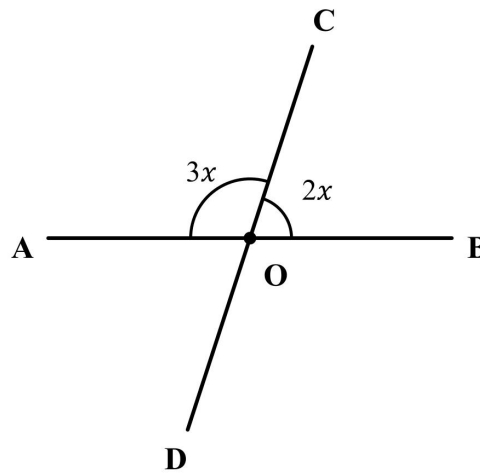
QUESTION 3: GEOMETRY OF STRAIGHT LINES [14]

3.1 Answer the following questions.

3.1.1 Write down the complement of 35° . (1)

3.1.2 Write down the supplement of 108° . (1)

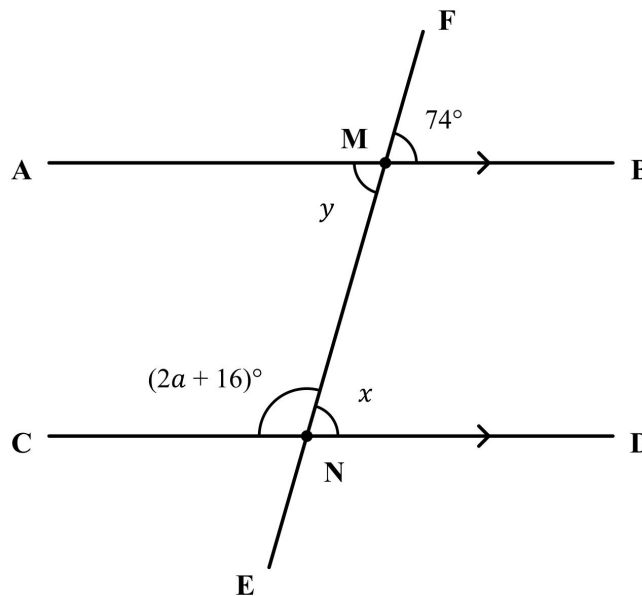
3.2 In the diagram below, the straight lines AB and CD cut each other at O.



3.2.1 Calculate the value of x . Give a reason for your answer. (3)

3.2.2 Hence, determine the size of $\angle BOD$. Give a reason for your answer. (2)

3.3 In the diagram below, $AB \parallel CD$. The transversal EF cuts AB at M and CD at N. $\angle FMB = 74^\circ$.



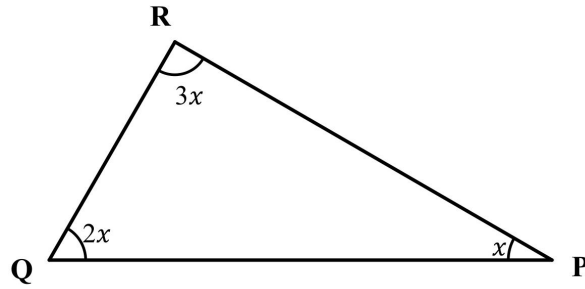
3.3.1 Determine the size of x . Give a reason for your answer. (2)

3.3.2 Determine the size of y . Give a reason for your answer. (2)

3.3.3 $\angle MNC = (2a + 16)^\circ$. Calculate the value of a . Give a reason for your answer. (3)

QUESTION 4: GEOMETRY OF 2D SHAPES [12]

4.1 In the diagram below, the interior angles of $\triangle PQR$ are x , $2x$ and $3x$.

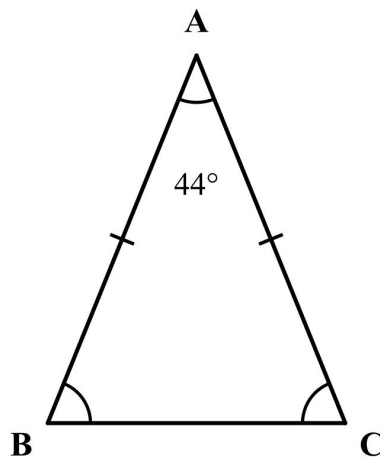


4.1.1 Calculate the value of x . Give a reason for your answer. (3)

4.1.2 Write down the size of the LARGEST angle of $\triangle PQR$. (1)

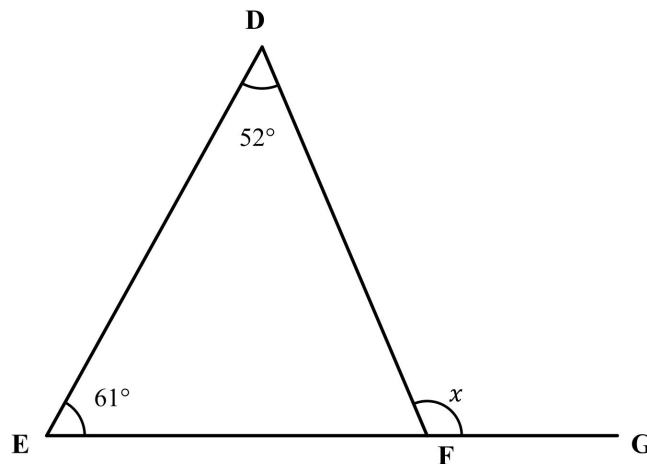
4.1.3 What type of triangle is $\triangle PQR$, according to its ANGLES? Give a reason for your answer. (2)

4.2 In the diagram below, $\triangle ABC$ has $AB = AC$ and $\hat{A} = 44^\circ$.



4.2.1 Determine, with reasons, the size of $\hat{B}$. (3)

4.3 In the diagram below, EF of $\triangle DEF$ is produced to G. $\hat{D} = 52^\circ$ and $\hat{E} = 61^\circ$.



4.3.1 Calculate the size of x . Give a reason for your answer. (2)

4.3.2 Hence, write down the size of $\angle DFE$. (1)

[12]