SMARTWIZ

GRADE 7 MATHEMATICS EXAM

MARKS: 75

MARKS	

TIME: 1 hour 30 minutes

SCHOOL_____

CLASS (e.g. 4A) _____

SURNAME_____

NAME_____

Instructions for Students:

> Read all instructions carefully before beginning the exam.

> Write your name and student ID clearly on the answer sheet/booklet.

> Answer all questions unless otherwise stated.

> Show all your work/calculations where applicable.

> Write clearly and legibly.

> Use blue or black ink only. * Do not use correction fluid/tape.

> No electronic devices (calculators, phones, etc.) are allowed unless explicitly permitted.

> Raise your hand if you have any questions.

> Do not talk to other students during the exam.

> Any form of cheating will result in disqualification.

This test consists of 5 pages, excluding the cover page.

SECTION A: WHOLE NUMBERS & INTEGERS (15 MARKS)

1.1 Write the number **4 035 029** in words.

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(1)

1.2 Round **368 934** to the nearest:
a) 1 000 _____
b) 10 000 _____

(2)

1.3 Calculate:
a) 9 543 ÷ 9

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b) 3 402 × 17

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(4)

1.4 Write the following integers in order from smallest to largest:
–18, 5, –7, 0, 11, –25

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(2)

1.5 Simplify:
a) –7 + (–3) _____
b) –12 – (–5) _____
(2)

1.6 Find the value of:
(−4)2+3×(−2)(-4)^2 + 3 × (-2)(−4)2+3×(−2)

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(2)

1.7 Calculate:
34+58\frac{3}{4} + \frac{5}{8}43+85

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(2)

SECTION B: ALGEBRAIC EXPRESSIONS & PATTERNS (15 MARKS)

2.1 Simplify:
a) 3x + 4x – 2x = _____
b) 5(a + 2) – 3(a – 1) = _____
(4)

2.2 Expand and simplify:
a) 2(x + 3) = _____
b) –3(x – 4) = _____
(4)

2.3 Factorise:
a) $x^2 + 5x$ = _____
b) 2a + 6 = _____
(2)

2.4 Complete the number pattern:
4, 9, 14, 19, ___, ___

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(2)

2.5 Rule for the pattern:

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(1)

2.6 20th term of the pattern =

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(2)

SECTION C: GEOMETRY (10 MARKS)

3.1 Name the angles:
a) _____
b)
_____

_
(2)

3.2 Classify triangles:
a) _____
b) _____
(2)

3.3 Measure this angle:
(Insert 65° angle here)
Measured angle: _____
(1)

3.4 Draw and label a triangle with angles of 50°, 60°, and 70° below:
(Draw in the box)

(2)

3.5 Two properties of a parallelogram:

1. _____
2. _____

(2)

3.6 Lines of symmetry in a square: _____
(1)

SECTION D: MEASUREMENT (10 MARKS)

4.1 Convert:
a) 4,5 km = _____ m
b) 3 000 ml = _____ l
(2)

4.2 Area of a rectangle (length = 12 cm, breadth = 5 cm):

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(2)

4.3 Area of triangle (base = 10 cm, height = 6 cm):

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(2)

4.4 Volume of cube (side = 4 cm):

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(2)

4.5 Perimeter of floor (6 m by 5 m):

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(2)

SECTION E: DATA HANDLING (10 MARKS)

5.1 Refer to the pictograph:

📘 = 2 books

Learner	Books Read
John	📘 📘 📘 📘
Mary	📘 📘 📘
Alice	📘 📘 📘 📘 📘
Tom	📘 📘

a) Books Alice read: _____
b) Who read the fewest books? _____
(2)

5.2 Draw a bar graph using the data above below:
(Draw in the box)

(4)

5.3 Mean number of books read:

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(2)

5.4 Mode of the data:

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(2)

TOTAL: 75 MARKS

MEMO :

SECTION A: WHOLE NUMBERS & INTEGERS *(15 Marks)*

1.1 Write in words:
✓ Four million and thirty-five thousand and twenty-nine (1)

1.2 Round off:
a) 369 000 ✓
b) 370 000 ✓ (2)

1.3 Calculate:
a) 9 543 ÷ 9 = **1 060 remainder 3** or **1 060.33** ✓
b) 3 402 × 17 = **57 834** ✓ (4)

1.4 Order from smallest to largest:
–25, –18, –7, 0, 5, 11 ✓ (2)

1.5 Simplify:
a) –7 + (–3) = **–10** ✓
b) –12 – (–5) = –12 + 5 = **–7** ✓ (2)

1.6 Calculate:

(−4)2+3×(−2)=16–6=10✓®(-4)^2 + 3 × (-2) = 16 – 6 = \boxed{10} ✓(−4)2+3×(−2)=16–6=10✓R◯

(2)

1.7 Add fractions:

34+58=68+58=118=138✓®\frac{3}{4} + \frac{5}{8} = \frac{6}{8} + \frac{5}{8} = \frac{11}{8} = \boxed{1 \frac{3}{8}} ✓43+85=86+85=811=183✓R◯

(2)

SECTION B: ALGEBRAIC EXPRESSIONS & PATTERNS *(15 Marks)*

2.1 Simplify:
a) 3x + 4x – 2x = **5x** ✓
b) 5(a + 2) – 3(a – 1)
= 5a + 10 – 3a + 3 = **2a + 13** ✓ (4)

2.2 Expand and simplify:
a) 2(x + 3) = **2x + 6** ✓
b) –3(x – 4) = **–3x + 12** ✓ (4)

2.3 Factorise:
a) $x^2 + 5x$ = **x(x + 5)** ✓
b) 2a + 6 = **2(a + 3)** ✓ (2)

2.4 Continue the pattern:
24, 29 ✓ (2)

2.5 Rule:
Add 5 ✓ (1)

2.6 20th term:
4 + (20 – 1) × 5 = 4 + 95 = **99** ✓ (2)

SECTION C: GEOMETRY *(10 Marks)*

3.1 Name the angles:
a) Obtuse angle ✓
b) Right angle ✓ (2)

3.2 Triangle classification:
a) Equilateral triangle ✓
b) Obtuse triangle ✓ (2)

3.3 Measure angle (provided):
65° ✓ (Accept 64°–66°) (1)

3.4 Triangle drawn with angles of 50°, 60°, and 70°
✓ Correct triangle and labels (2)

3.5 Properties of a parallelogram:

- Opposite sides are equal ✓
- Opposite angles are equal ✓ (2)

3.6 Lines of symmetry in a square:
4 ✓ (1)

SECTION D: MEASUREMENT *(10 Marks)*

4.1 Convert units:
a) 4,5 km = **4 500 m** ✔
b) 3 000 ml = **3 l** ✔ (2)

4.2 Area of rectangle:
12 cm × 5 cm = **60 cm²** ✔ (2)

4.3 Area of triangle:
½ × base × height = ½ × 10 × 6 = **30 cm²** ✔ (2)

4.4 Volume of cube:
Side³ = 4³ = **64 cm³** ✔ (2)

4.5 Perimeter of rectangle:
2 × (6 + 5) = 2 × 11 = **22 m** ✔ (2)

SECTION E: DATA HANDLING *(10 Marks)*

5.1 Use the pictograph:
a) Alice read 5 books × 2 = **10 books** ✔
b) Tom ✔ (2)

5.2 Bar graph includes:
✔ Title
✔ Labels
✔ Scale
✔ Correct bars (4 marks)

5.3 Mean:
(8 + 6 + 10 + 4) ÷ 4 = **28 ÷ 4 = 7 books** ✔ (2)

5.4 Mode:
All values are different → **No mode** ✔ (2)

✅ GRAND TOTAL: 75 MARKS