

END TERM 3 2026

GRADE 10

CORE MATHEMATICS

MARKING SCHEME & TEACHER'S GUIDE

Award marks for correct mathematical method and reasoning. Accept equivalent valid methods.

1(a) — 4 marks

7 rational — 1

$\sqrt{7}$ irrational — 1

0.125 rational — 1

π irrational — 1

1(b) — 2 marks

Reciprocal operation — 1

$8/5$ — 1

1(c) — 2 marks

Correct index simplification — 1

1 — 1

1(d) — 2 marks

$1000=10^3$ — 1

Answer 3 — 1

2(a) — 3 marks

Factors 4 and 5 — 1

Correct signs — 1

$(x-4)(x-5)$ — 1

2(b) — 4 marks

$(x-3)(x-4)$ — 2

$x=3$ — 1

$x=4$ — 1

2(c) — 3 marks

Width x , length $x+2$ — 1

$x^2+2x-48=0$ — 1

Dimensions 6 m by 8 m — 1

3(a) — 4 marks

Area ratio 4:25 — 2

Volume ratio 8:125 — 2

3(b) — 2 marks

Reflection rule — 1



$$A' = (-3, 2) \text{ — 1}$$

3(c) — 2 marks

$$(x, y) \rightarrow (-y, x) \text{ — 2}$$

4 — 6 marks

$$\text{Magnitude } \sqrt{6^2 + 8^2} = 10 \text{ — 2}$$

$$u + v = (6, 2) \text{ — 2}$$

Translation 3 left, 5 up — 2

5 — 8 marks

Hypotenuse 15 cm — 2

$$\sin \theta = 3/5, \cos \theta = 4/5, \tan \theta = 3/4 \text{ — 3}$$

$$\sin 30^\circ = 1/2, \cos 60^\circ = 1/2, \tan 45^\circ = 1 \text{ — 3}$$

6 — 8 marks

Triangle area 45.5 cm² — 3

Regular hexagon area ≈ 166.28 cm² using a valid method — 3

Sector area 154 cm² — 2

7 — 8 marks

Cylinder volume 15.4 m³ — 3

Cuboid TSA 158 cm² — 3

Frustum requires upper/lower radii (or diameters) and perpendicular height — 2

8 — 8 marks

Graph axes/scale/points/line — 3

Speed = gradient = 5 m/s — 2

Relative speed = 3 m/s — 3

9 — 8 marks

Correct frequency table — 3

Mean = 4 — 2

Mode = 2 — 1

Median = 3.5 — 2

10 — 8 marks

Modal class 20–29 — 2

Total frequency 30 — 2

Histogram bars touch and use class intervals; frequency polygon uses class midpoints joined by straight lines — 4

11 — 8 marks

$$P(\text{red}) = 2/5 \text{ — 2}$$

$$P(\text{blue or green}) = 3/5 \text{ — 2}$$

$$P(\text{six and head}) = 1/12 \text{ — 2}$$

$$0 \leq P \leq 1 \text{ — 2}$$

12 — 10 marks

Complete correct tree — 3

$$P(W \cap B) = 0.28 \text{ — 2}$$

$$P(W \cap \text{not } B) = 0.12 \text{ — 2}$$

Independence permits $P(A \cap B) = P(A)P(B)$ — 3

CURRICULUM COVERAGE VERIFICATION

Sub-strand	Curriculum Area	Marks
1.1	Real Numbers	6
1.2	Indices and Logarithms	4
1.3	Quadratic Expressions and Equations	10
2.1	Similarity and Enlargement	4
2.2	Reflection and Congruence	2
2.3	Rotation	2
2.4	Trigonometry 1	8
2.5	Area of Polygons	3
2.6	Area of a Part of a Circle	2
2.7	Surface Area and Volume of Solids	8
2.8	Vectors 1	6
2.9	Linear Motion	8
3.1	Statistics 1	16
3.2	Probability 1	18

The supplied KICD Grade 10 Core Mathematics design identifies three strands and the sub-strands listed above. The assessment is cumulative and samples every sub-strand.

TOTAL: 100 MARKS

END OF MARKING SCHEME

