SOUTH AFRICAN MATHEMATICAL LITERACY OLYMPIADS

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SA Olympiads MathsLit

GRADE 11

DATE: 4 AUGUST 2026

TIME: 90 MINUTES

INSTRUCTIONS:

1. This booklet has 10 multiple-choice questions (Questions 1–10) and 10 open-ended questions (Questions 11–20).
2. Use the answer sheet provided. For the multiple-choice questions, circle the letter corresponding to your answer.
3. All working details must be done in the space provided.
4. Calculators are permitted.
5. Diagrams are not necessarily drawn to scale.
6. Questions 1–15 carry 1 mark each; Questions 16–20 carry 2 marks each.
7. You have 90 minutes for the paper (an average of 4.5 minutes per question).
8. Read the questions carefully before answering.
9. Visit the website: www.saolympiads.co.za.

ENJOY THE OLYMPIAD.

SA Olympiads MathsLit 2026 — GRADE 11

SECTION A — MULTIPLE CHOICE (Questions 1–10 • 1 mark each)

1. Evaluate: (9/16) × 1001 + (7/16) × 1001 − 1000

(A) 0 (B) 1 (C) 2 (D) 5

2. Evaluate: 3333 × 102 + 3333 × 101 − 103 × 3333

(A) 0 (B) 3333 (C) 33 300 (D) 333 300

3. Evaluate: $360 \times 25\frac{7}{12}$

(A) 9210 (B) 9310 (C) 9410 (D) 9510

4. Five litres of special chemical costs R1000. What will 175 ml of this special chemical at the same rate cost?

(A) R45 (B) R40 (C) R35 (D) R30

5. A truck load of building sand is 6 m³. 400 m³ of building sand was needed. How many loads are needed?

(A) 66 (B) 67 (C) 68 (D) 69

6. Sandy takes out a loan at a bank to purchase a car for R360 000 at a simple interest of 12% per annum for 4 years. Calculate her monthly instalment.

(A) R10 000 (B) R10 500 (C) R11 000 (D) R11 100

7. A gemstone factory makes 24 000 gemstone chains in 7 days. If the workers work at the same rate, how many gemstone chains can they make in 28 days?

(A) 102 000 (B) 99 000 (C) 96 000 (D) 93 000

8. A company pays commission of 12% on sales. If the total paid by customers for the month was R4 480 000 (inclusive of the 12% commission added on top of the sales price), determine the sales excluding commission.

(A) R4 000 000 (B) R3 600 000 (C) R3 200 000 (D) R3 000 000

9. The price of 1 kWh of electricity increased from R3.70 by 15%. What would a household pay for 800 kWh of electricity per month?

(A) R3200 (B) R3300 (C) R3400 (D) R3404

10. To tint 20 litres of paint, 0.8 litres of tint is used. If 7.2 litres of tint was used, determine how many litres of paint were tinted.

(A) 160 (B) 180 (C) 200 (D) 240

SECTION B — OPEN-ENDED (Questions 11–15 • 1 mark each • write your answer in the space provided or the answer sheet)

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11. A company manufactures brake pads. Fixed cost (FC) = R1 200 000; Variable cost (VC) = R350; Selling price (SP) = ? Use the break-even point formula to determine the selling price if the break-even quantity is 4800.

12. It took Petros 20 minutes to cover 35 km from home to the shopping centre. Calculate Petros's average speed in km/h during the trip.

13. Four fruit trees are grown in a 3 m by 3 m square plot. What is the maximum number of fruit trees that can be planted on a farm 300 m by 200 m?

14. 90 learners had to select at least one of two subjects, Life Sciences and Business Studies. The number who selected Business Studies is 10 more than those who selected Life Sciences. The number who selected both subjects is 10 less than the number who selected Life Sciences only. What is the probability that a learner selected at random would be doing Life Sciences only?

15. Tickets at a cricket match were sold in the same ratio as their prices, which were 4:3:1. If the total takings from the 3:1 (middle and cheap) ticket categories is R1 400 000, determine the takings from the expensive (4-part) ticket category.

SECTION C — OPEN-ENDED (Questions 16–20 • 2 marks each • write your answer in the space provided or the answer sheet)

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16. To hire a truck the charges are a fixed charge of R2000 and a variable charge of R15 per km. If the number of km travelled is n, determine the cost of hire in terms of n.

17. If an article costs 6400 Pesos (P) and the exchange rate is 1 P : R1.25, how much will the article cost in rand?

18. A car uses 48 litres of petrol to get from Durban to East London, which is 640 km apart. Determine the rate as litres per 100 km.

19. Two cyclists ride in opposite directions around a circular track and complete the track in 4 minutes and 6 minutes respectively. Starting from the same point, how many times will they pass each other in one hour?

20. A cargo tanker has dimensions of 2.4 m × 3.6 m × 15 m. Cartons have dimensions 45 cm × 60 cm × 75 cm. What is the maximum number of cartons that can fit into the tanker?

MARKS: 15 × 1 = 15

5 × 2 = 10

TOTAL: 25