SOUTH AFRICAN MATHEMATICAL LITERACY OLYMPIADS

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SA Olympiads MathsLit

GRADE 10

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 10

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

1. Evaluate: 40 − 40 × 3/8

(A) 35 (B) 30 (C) 25 (D) 0

2. Jenny earned R3000 for working a 40-hour week. What was the rate per hour?

(A) R65 (B) R75 (C) R85 (D) R95

3. A cake requires 250g flour. How many cakes can be made from 25 kg of flour?

(A) 130 (B) 120 (C) 110 (D) 100

4. 7/12 is written as a repeating decimal fraction. Write down the sum of the first 42 digits after the decimal point.

(A) 133 (B) 130 (C) 120 (D) 110

5. Evaluate: $450 \times 3\frac{7}{15}$

(A) 1500 (B) 1560 (C) 1600 (D) 1660

6. The production of shoes in a factory increased by 15% to 64 400 in one week. What was the production before the increase?

(A) 60 000 (B) 58 000 (C) 56 000 (D) 54 000

7. Fruit cocktail is mixed in the ratio water : concentrate : coconut milk = 5 : 2 : 2. The company makes 5400 litres. How many litres of coconut milk are needed?

(A) 2700 (B) 2400 (C) 1800 (D) 1200

8. The distance in km a drone travels in t minutes is given by $d(t) = -1.8t^2 + 60t$. Determine the distance in km the drone reaches in the 10th minute.

(A) 420 (B) 450 (C) 480 (D) 510

9. A tractor travels at an average speed of 30 km/h. If it leaves at 06:00 and travels at the same speed, at what time will the tractor reach its destination, which is 40 km away?

(A) 07:00 (B) 07:20 (C) 07:45 (D) 08:10

10. The dimensions of a rectangular field measuring 120 m by 80 m were decreased in the ratio 3:5. What is the new perimeter of the field in metres?

(A) 200 (B) 220 (C) 240 (D) 270

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. 3-legged and 4-legged tables were manufactured. There were 310 legs and 90 tables in total. How many 3-legged tables were manufactured?

12. A rectangular container, open at one 3 m × 3 m end, has dimensions 10 m by 3 m by 3 m. Determine the cost of painting the outside of the container at R250/m².

13. A construction company charges R500 per hour and a fixed charge of R1500 for hiring a payloader. If the number of hours is represented by the variable n, determine the expression in terms of n for the cost of hiring the payloader.

14. It takes 6 workers 18 hours to make 40 chains. How long in hours will it take 9 workers, working at the same rate, to make 40 chains?

15. Thando installed a solar system for R63 000. She was charged simple interest at 12% per annum. What is her monthly instalment if she has to pay over 24 months?

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. During a Black Friday sale, a departmental store decreased the price of all items by 30%. A further discount of 20% was given. What fraction of the original price does the customer pay?

17. Special gemstones were exchanged as follows: 6 Ss could be exchanged for 5 Es; 5 Ds could be exchanged for 4 Rs; 4 Ss could be exchanged for 3 Rs. How many Es could one get for 9 Ds?

18. 6 blue blocks and 4 green blocks were placed in a bag. A first block was drawn at random and not replaced. A second block was drawn at random and not replaced. What is the probability of drawing at least one green block?

19. Tanny runs at two-thirds the speed of Virginia. If Tanny takes 24 minutes to complete a 3600 m race, how far ahead in metres will Virginia finish if both run at constant speeds starting from the same place at the same time?

20. A section of a stairway has each stair 320 mm wide and a gradient of 3/8. If the vertical height AB is 9 m, determine the number of stairs.

MARKS: 15 × 1 = 15

5 × 2 = 10

TOTAL: 25