South African Primary School
Mathematics Olympiad: Grade 4 - 7

science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

SA OLYMPIADS

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MATHEMATICS OLYMPIAD
GRADE SEVEN

DATE: 19 AUGUST 2026
TIME: 90 MINUTES

INSTRUCTIONS:

1. This booklet has 15 multiple-choice and 5 open-ended questions.
2. Use the answer sheet provided. Circle the letter corresponding to your answer.
3. All working details must be done in the space provided.
4. Calculators are not permitted.
5. Diagrams are not necessarily drawn to scale.
6. The first 15 problems carry 1 mark each and the next 5 carry 2 marks each.
7. You have 90 minutes for the paper which works out to 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!

GRADE SEVEN

SECTION A: MULTIPLE CHOICE (Questions 1 – 15, 1 mark each)

1. Evaluate: $20 \times \frac{4}{5} - 2 \div 0.4$

(A) 9 (B) 10 (C) 11 (D) 12

2. Write down the value of: 24×125

(A) 2000 (B) 3000 (C) 4000 (D) 5000

3. When 800 is increased by 25% the answer is …

(A) 1000 (B) 1100 (C) 1200 (D) 1500

4. Evaluate: $333 + 666 + 444 + 777$

(A) 2000 (B) 2100 (C) 2200 (D) 2220

5. Determine: $\sqrt{313600}$

(A) 550 (B) 560 (C) 570 (D) 580

6. If 12 workers take 8 days to assemble 20 appliances, how long (in days) will it take 8 workers working at the same rate to assemble 10 appliances?

(A) 3 (B) 4 (C) 5 (D) 6

7. The scale on a map shows the ratio 1 : 400 000. Terri measured the distance between Blue Town and Red Town as 8 cm. What is the actual distance between the towns in km?

(A) 32 (B) 36 (C) 38 (D) 40

8. In the following subtraction problem, find A + C = …

$$\begin{array}{rccc} & C & 3 & 2 \\ - & 2 & C & A \\ \hline & 1 & A & C \end{array}$$

(A) 11 (B) 12 (C) 13 (D) 14

9. Evaluate the product below: $375 \times 109 - 125 \times 99 \times 3 - 75 \times 50$

(A) 125 (B) 75 (C) 0 (D) 100

10. A water tank is $\frac{1}{4}$ full. When 100 blocks measuring 100 cm by 300 cm by 30 cm are dropped into the tank, the water level rises to $\frac{5}{8}$ of the tank. What is the capacity of the tank in kl? (Note: 1000 litres = 1 kl and 1 cm^3 = 1 ml)

(A) 200 (B) 220 (C) 240 (D) 320

11. The following addition is done in base 5:

```
  4 4 4
  3 3 3
+ 2 2 2
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2 1 0 4
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What is the answer to 123 + 234 + 432 in base 5?

(A) 1444 (B) 1314 (C) 1404 (D) 1344

12. Observe the following pattern:

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7    8    9
10   11   12   13
14   15   16   17   18
.....
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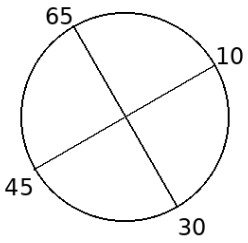
What is the 2nd number of the 25th row?

(A) 354 (B) 355 (C) 356 (D) 357

13. Rene beat Carmen by 10 metres in a 100 metre race. If both run at the same rate, what lead (Carmen runs 100 metres) in metres must Rene give Carmen for the race to be a dead heat (no one wins)?

(A) $11\frac{1}{9}$ (B) 11 (C) $10\frac{1}{9}$ (D) 10

14. People were evenly spaced around a circle. Number 45 was standing opposite 10. Number 65 was standing opposite 30. How many people were standing on the circumference of the circle?



(A) 80 (B) 75 (C) 70 (D) 65

15. Determine the value of: $1 + \cfrac{1}{1+\cfrac{1}{1+\cfrac{1}{12}}}$

(A) $\frac{25}{13}$ (B) $\frac{13}{25}$ (C) $\frac{63}{25}$ (D) $\frac{38}{25}$

SECTION B: OPEN ENDED (Questions 16 – 20, 2 marks each)

16. Three taxis leave a terminal at 07:00. A green taxi takes 15 minutes for a return trip, the blue taxi takes 20 minutes and the silver taxi takes 30 minutes. They each remain at the terminus for 10 minutes between trips. What is the earliest time all 3 taxis will leave together?

17. An exchange centre gives the following exchange rates:

- 4 bronze coins for 3 silver coins
- 4 silver coins for 3 gold coins
- 3 gold coins for 5 platinum coins

How many bronze coins can one get for 15 platinum coins?

18. The time on an analogue clock shows 3 o'clock. What is the earliest time at which the hour and minute hands will be exactly opposite each other?

19. Calculate: 120 – 116 + 112 – 108 + … – 4

20. Three numbers at a time are chosen from the eleven numbers 15 to 25. How many of these combinations have a sum divisible by 9?

MARKS: 1–15: 15 × 1 = 15
16–20: 5 × 2 = 10
TOTAL: 25