MATHEMATICS OLYMPIAD GRADE FIVE

DATE: 12 AUGUST 2024 – 16 AUGUST 2024

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.

E-mail : Maths@saolympiads .co.za website: www.saolympiads .co.za

GRADE FIVE

1. Evaluate: 888 + 222 + 555

   (A) 1565 (B) 1645 (C) 1655 (D) 1665

2. Evaluate: 300 x 36

   (A) 10400 (B) 10600 (C) 10800 (D) 11800

3. Determine the difference between 4000 and 1234.

   (A) 2766 (B) 2776 (C) 2786 (D) 2796

4. Divide 2464 exercise books among 11 learners.

   (A) 222 (B) 224 (C) 226 (D) 228

5. Leane scored 75 runs in 15 overs. Determine her run rate as runs per over.

   (A) 5 (B) 5.4 (C) 5.5 (D) 5.6

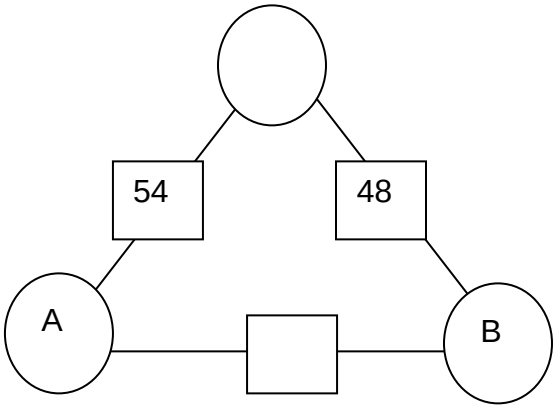
6. If $\frac{3}{4}$ of the cartons is 360 then what is $\frac{1}{3}$ of the cartons?

   (A) 120 (B) 140 (C) 160 (D) 180

7. The sum of the dates of the 5 Tuesdays of the month is 85. What is the sum of the Wednesdays of the month?

   (A) 58 (B) 59 (C) 86 (D) 92

8. In the game called “Geogons”, the product of the 2 numbers in the 2 circles, determine the number in the square between them.



If A + B = 17 then find the value of A.

(A) 6 (B) 7 (C) 8 (D) 9

9. Study the following arrangement of numbers:-

3 5
7 9 11
13 15 17 19
……

What is the 3rd number of the 19th row?

(A) 381 (B) 383 (C) 385 (D) 387

10. A container is $\frac{3}{4}$ full of milk. When 20 litres was removed then it was $\frac{1}{8}$ full.

What is the capacity of the container in litres?

(A) 30 (B) 32 (C) 36 (D) 40

11. Candy had three times as many R2 coins as R5 coins. The total amount was R858. What amount in R2 coins did Candy have?

(A) R468 (B) R478 (C) R488 (D) R498

12. A rectangular lawn measures 300 metres all round. If the width is 30 metres less than half its length, then find the length in metres.

(A) 150 (B) 140 (C) 130 (D) 120

13. After a decrease of $\frac{1}{8}$ in the price, an item was sold for R1400. What was the price of the item before the decrease?

(A) R1800 (B) R1700 (C) R1600 (D) R1500

14. Study the following problem. Do you know what (@) is doing to the 2 numbers?

6@3 = 9 1@2=3 8@6 = 10 3@5=7

After you have discovered what (@) is doing then find the answer to: 4@7

(A) 10 (B) 11 (C) 12 (D) 13

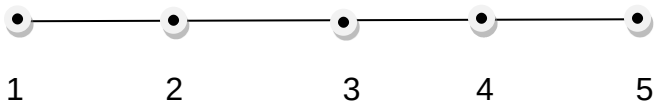
15. Mariot is 20 years old and his sister is 16. How long ago was he twice as old as his sister?

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

16. Evaluate:

$$\frac{4+6+8+10+\cdots+20}{10+15+20+25+\cdots+50}$$

17. Polly thought of 3 numbers. When Polly added two numbers at a time, she obtained 28; 32 and 36. What is the smallest number?

18. 

5 friends A;B;C;D and E were seated at a straight table on one side for lunch.
D was seated at chair 1.
A was seated between D and E. E was seated between C and B. A was seated to the right of C.
Who was sitting between A and B?

19. 16 learners pay for a project. When 8 more learners contributed the cost was reduced by R10 per learner. What was the cost of the project?

20. Colour stones green (G) and red (R) were arranged as follows:

R R G R R G G R R G G G R R G G G G R R G G G G G R R .....

The arrangement has 240 stones.
How many green stones are there?

MARKS: 1-15: 15 X 1 = 15
16-20: 5 X 2 = 10

TOTAL: 25