FEMSSISA SOUTHERN AFRICAN PRIMARY MATHEMATICS OLYMPIAD

(SAPMO)
GRADE FOUR
FINAL ROUND
DATE: 12 OCTOBER 2017
TIME: 120 MINUTES

Instructions:

1. This booklet has 20 questions.

2. Use the answer sheet provided. Enter your answer in the block.

3. All working details must be done in the space provided.

3. Calculators are not permitted..

4. Diagrams are not necessarily drawn to scale.

5. The first 15 problems carry one mark each and the next 5 carry 2 marks each.

6. You have 120 minutes for the paper which works out to an average of 6 minutes per question.

7. Read the questions carefully before answering.

1. Write down the 12th number of this addition sequence.

   9; 14; 19; 24; ...

2. Find the value of ☐

   $48 - \square + \triangle = \square + \triangle$

3. Candy has $\frac{3}{4}$ as much money as Tessa
   If both have R490 then how much does Tessa have?

4. Verona counted in 5's as follows:
   10; 15; 20; 25; ...
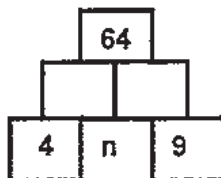   She stopped at the 24th number. What number did she count last?

5. If the date is Friday the 12th of the month then what 3rd Wednesday of the month?

6. In this addition problem certain digits have been replaced by letters. Each letter stands for a different digit.
   What is the value of A + B?

   ```
     A B
     A B
     A B
   ───────
   2 2 8
   ```

7. In the game below called "PYRAMATHS' the number on the right box is doubled and added to the number on the left box to give the number in the box above them.
   Find the number that should replace 'n'.

   ```
        ┌────┐
        │ 64 │
        └────┘
      ┌───┬───┐
      │   │   │
   ┌──┴┬──┴┬──┴┐
   │ 4 │ n │ 9 │
   └───┴───┴───┘
   ```

8. An item was bought for a certain amount. It was sold for R10 more. Later it was bought for R25 less. Finally it was sold for R40 more. If the final price was R90 then what was the initial price that it was bought for?

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

   2 @ 3 = 11   1 @ 1 = 4   5 @ 2 = 11

   After you have discovered what @ does then find the answer to

   4 @ 4

10. Cool has 3 times as much money as Tickey. If both have R360 then how much does Tickey have?
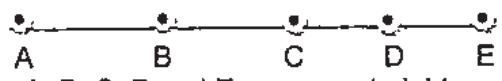
11. How many lines of symmetry does this square figure have?

12. A container is $\frac{3}{4}$ full of juice. When 40 litres are removed then it is $\frac{1}{3}$ full. What is the capacity of the container when full?

13. If 2.5 litres of scented water cost R30. What will 1.5 litres cost at this same rate?
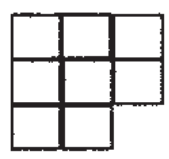
14.

   A   B   C   D   E

   Five towns A; B; C; D and E are on a straight road. The distance from A to D is 7 km. The distance from B to E is 8 km; (CE + AB) is 10 km and (AC + DE) is 11km.

   What is the distance from D to E?

15. How many squares of all sizes in this figure?

16. Jeremy has twice as many 20 cent coins as 50 cent coins. How many 20 cent coins did Jeremy have in R270?

17. Determine my number:-
    * I am a 3 digit number
    * The sum of my unit's digit and ten's digit is 13
    * The sum of my unit's digit and hundred's digit is 11
    * The sum of my hundred's digit and ten's digit is 10

18. Cher made 4 digit numbers from the digits 1; 4; 6 and 7. How many of these 4 digit numbers are odd?

19. Kerry is 12 years more than twice Penny's age. If Kerry is 42 then what is Penny's age.

20. The sum of the digits of a three digit number is 9. No digit is repeated in the number. How many such three digit numbers can we get?

TOTAL: 15 x 1 = 15
       5 x 2 = 10

25