10TH edition

THE ULTIMATE MATHEMATICS AMBASSADOR 2022

TUMA

(Annual Mathematics Competition)

STAGE 2 - SPEED TEST

TIME ALLOWED: 10 minutes

INSTRUCTIONS

1. This Test consists of 20 questions.

2. This Test is worth 20 marks.

3. Each question is worth 1 mark.

4. Please write your final answer only in the space provided after each question.

5. Speed is of great importance in this Test.

SECTION A

INSTRUCTION: *Answer all questions in this section. Write the correct answer in the space provided.*

1. Express 36% in its lowest terms

    Answer: _____

2. Find the volume, in cm^3 of a cube of length 1cm.

    Answer: _____ cm^3

3. What is the circumference of a circle if the one-tenth of the circumference is 56cm?

    Answer: _____ cm

4. Shade got 42 out of 60 mathematics questions. What percentage of question did she miss?

    Answer: _____ %

5. Simplify $\frac{2\,424}{12}$

    Answer: _____

6. Simplify the "Roman Numeral Expression": $\frac{XXXVI}{III}$, giving your answer in tally form

    Answer: _____

7. Solve $3x + x + 5 = 3x + 7$

    Answer: _____

8. A man is 4 times as old as his son. Find the age of the man if their ages differ by 30 years.

    Answer: _____ years

9. How many lines of symmetry does a square have?

Answer: _____

10. In a pupil's race, Thomas is the 4th from the front and 19th from the rear. How many pupils are running the race?

Answer: _____

11. Arrange these four digits, 7 6 5 4, to make the number closest/nearest to 5 000.

Answer: _____

12. Simplify: $\frac{1\times2\times3\times4\times5}{1+2+3+4+5}$

Answer: _____

13. A palindrome is a whole number that reads the same forward and backwards (e.g. 1221). How many palindromes are there between 100 and 200?

Answer: _____

14. What is the smallest 2-digit number that can be formed by the addition of 2 or more square numbers (perfect squares)?

Answer: _____

15. The product of a certain number and 14.8 is 1. What is the product of the number and 14.8^2?
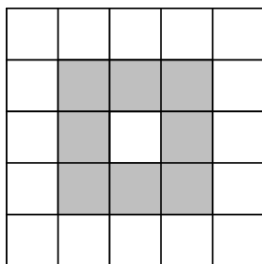
Answer: _____

16. Find the volume of a spherical bowl of radius 7cm.

Answer: _____cm^3

17. Afe sets his clock correctly at 9:00am. It loses 5 minutes every hour. What time will be shown on the clock when the actual time is 5:00pm?

Answer: _____

18. In the square pattern below, the ratio of black square tiles to white square tiles is

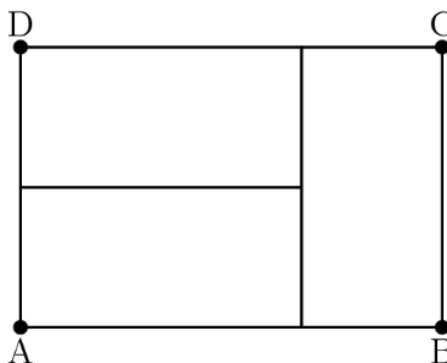*Answer:* _____

19. Mr Johnson boards a flight from Lagos to Abuja. Upon reaching $\frac{1}{3}$ of the total distance, he fell asleep. When he finally woke up, the remaining distance to Abuja was $\frac{1}{8}$ of the total distance. What fraction of the entire trip was Mr Johnson asleep?

Answer: _____

20. Three identical rectangles are put together to form rectangle ABCD as shown in the figure below. Given that the length of the shorter side of each of the smaller rectangles is 5m, what is the area of rectangle ABCD?

Answer: _____ m^2