THE AMBASSADORS SCHOOLS, OTA

Website: www.theambassadorsschools.com
E-mail: theambassadorsschools@gmail.com
Tel: 0805 510 3318, 0805 617 5107, 0806 890 4666

13th Edition

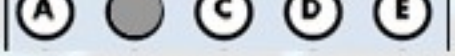
THE ULTIMATE MATHEMATICS AMBASSADOR 2025

TUMA 2025

Annual Mathematics Competition

TIME ALLOWED: 1 hour 30 minutes

INSTRUCTIONS

1. This paper is in two sections (A and B).
2. You are to answer all the questions in the two sections
3. SECTION A consists of 40 multiple-choice questions. Each question in this section is worth 2 marks
4. Use HB pencil ONLY to shade the appropriate answer from the options labelled A to E in the appropriate section of the answer sheet.
5. Below is a sample of how to shade correctly. For instance, if your answer to a question is option B then shade as indicated. 

6. Do not shade more than one option for each question. If you make a mistake, erase neatly with an eraser and then shade your new option.
7. SECTION B consists of 10 questions. You are to write only the answer to the questions in this section. Each question is worth 2 marks.
8. Orderliness, neatness and clarity is encouraged.

SECTION A

INSTRUCTION: *Answer all questions in this section. Pick the appropriate answer from the options lettered A to E.*

1. Find the average of 24, 32, 20 and 8.

   (a) 21 (b) 22 (c) 23

   (d) 31 (e) 32

2. What is the total salary of 9 ministers earning ₦1.5 million each?

   (a) ₦10.5 million (b) ₦12.5 million (c) ₦13.5 million

   (d) ₦18 million (e) ₦91.5 million

3. How many lines of symmetry does a scalene triangle have?

   (a) 0 (b) 1 (c) 2

   (d) 3 (e) 4

4. What is the value of 3 in the number 345.098 2?

   (a) 3 units (b) 3 hundredths (c) 3 tens

   (d) 3 hundreds (e) 3 thousands

5. Find the ratio of twenty seconds to two minutes.

   (a) 10:1 (b) 1:10 (c) 1:60

   (d) 60:1 (e) 1:6

6. What is the mode of the data: 4, 7, 2, 4, 6, 1, 4, 9, 9, 4?

   (a) 2 (b) 4 (c) 6

   (d) 8 (e) 9

7. How long will it take Ahmed to write a 250-word essay if he writes 25 words in one minute?

(a) 5 minutes (b) 10 minutes (c) 15 minutes
(d) 50 minutes (e) 1 hour

8. Express 48% as a fraction in its lowest terms.

(a) $\frac{48}{99}$ (b) $\frac{23}{25}$ (c) $\frac{6}{7}$
(d) $\frac{16}{25}$ (e) $\frac{12}{25}$

9. Which of the following is equal to $\frac{1}{6}$?

(a) $\frac{3}{6}$ (b) $\frac{3}{9}$ (c) $\frac{3}{18}$
(d) $\frac{3}{24}$ (e) $\frac{6}{1}$

10. Find the product of:

$$\left(1+\frac{1}{4}\right)\left(1-\frac{1}{5}\right)\left(1+\frac{1}{6}\right)\left(1-\frac{1}{7}\right)\left(1+\frac{1}{8}\right)\left(1-\frac{1}{9}\right)\left(1+\frac{1}{10}\right)\left(1-\frac{1}{11}\right)$$

(a) 0 (b) 1 (c) 45
(d) $\frac{15}{44}$ (e) $\frac{1\,649}{66\,528}$

11. What is the difference between the sum of angles in a square and the sum of angles in a triangle?

(a) 540° (b) 360° (c) 180°
(d) 90° (e) 43.5°

12. Find the positive difference between the prime factors of 160

(a) 5 (b) 4 (c) 3

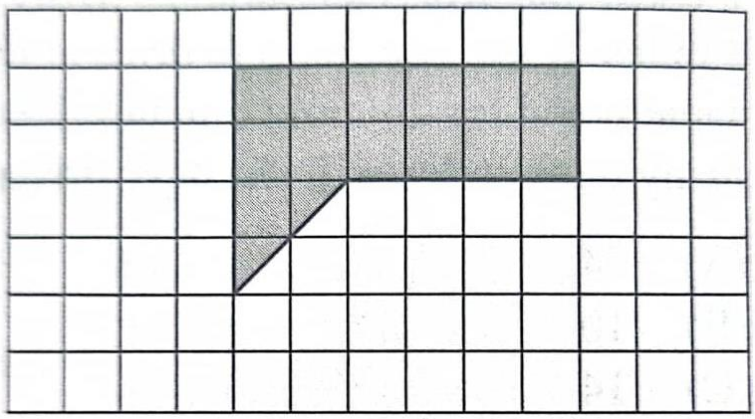
(d) 2 (e) 1

13. Find the simple interest on \$280 000.00 for 5 years at the rate of 6% per annum.

(a) \$364 000.00 (b) \$84 000.00 (c) \$75 000.00

(d) \$21 000.00 (e) \$14 000.00

14. What is the area of the shaded region in the figure below?



(a) 12 (b) 13 (c) 14

(d) 15 (e) 16

15. Convert the distance $42km$, $24m$ to centimetres.

(a) 4 202 400cm (b) 422 400cm (c) 660 000cm

(d) 66 000cm (e) 24 042 000cm

16. Find the difference between MLXXVI and DXCIV.

(a) DCLXXI (b) CCCXCV (c) MCX

(d) MDCLXIV (e) CDLXXXII

17. The perimeter of a square with sides $6cm$ long is how much less than the perimeter of a rectangle with length $8cm$ and breadth $5cm$?

(a) $1cm$ (b) $2cm$ (c) $3cm$

(d) $4cm$ (e) $5cm$

18. Betty is twice as old as her daughter, Laura. Laura is twice as old as her dog, Bruno. How old is Betty given that Bruno is 12 years old?

(a) 3 years (b) 6 years (c) 12 years

(d) 48 years (e) 64 years

19. Find the average speed (in km/hr) of a car that travels $110km$ in 40 minutes.

(a) 60 km/hr (b) 70 km/hr (c) 73 km/hr

(d) 155 km/hr (e) 165 km/hr

20. Find 30% of 30% of 3 000.

(a) 900 (b) 810 (c) 600

(d) 360 (e) 270

21. 5 dozen of shirt cost ₦210 000. What is the cost of a score of the shirts?

(a) ₦35 000 (b) ₦56 000 (c) ₦70 000

(d) ₦105 000 (e) ₦840 000

22. Find the sum of 0.0054, 92.98, 76.94, 0.89 and 0.03.

(a) 170.894 (b) 170.8454 (c) 171.38

(d) 171.6538 (e) 200

23. The vertical angle in an isosceles triangle is 71^o. Find the size of one of the base angles?

(a) 18° (b) 19° (c) 29°

(d) 54.5° (e) 109°

24. My mum bought a kg of meat for ₦6 000.00. She bought three kg for ₦22 500.00 the following week. What is the percentage increase in the price of a kg of meat?

(a) 275% (b) 25% (c) 20%

(d) 10% (e) 5%

25. Find the value of $\frac{1}{\sqrt{25}} + \frac{1}{\sqrt{49}} - \frac{1}{\sqrt{16}}$

(a) $\frac{6}{17}$ (b) $\frac{87}{140}$ (c) $\frac{1}{58}$

(d) $\frac{1}{8}$ (e) $\frac{13}{140}$

26. The sides of a triangle are $(2x + 3)$, $(x + 4)$ and $(4x - 7)$. Find the value of x if the perimeter of the triangle is $56cm$.

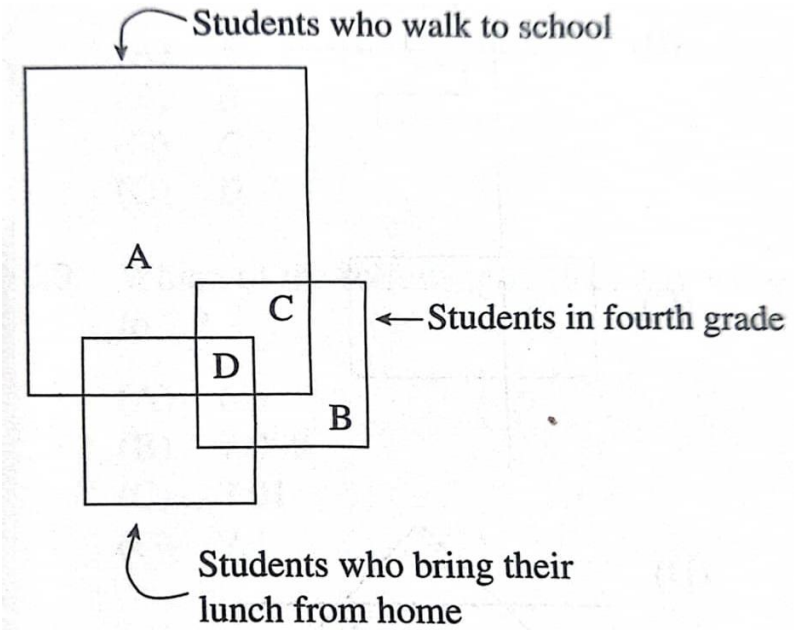
(a) $64cm$ (b) $15cm$ (c) $10cm$

(d) $8cm$ (e) $7cm$

27. Round 45.148 to 1 decimal place.

(a) 50 (b) 45 (c) 45.1

(d) 45.2 (e) 45.15



28. In which region of the figure above would you find Samuel, a fourth-grade student who walks to school and buys his lunch in school?

(a) A (b) B (c) C

(d) D (e) A & B

29. If $a + 2 > 5$ and $a - 4 < 1$, which of the following is a possible value for a?

(a) 1 (b) 2 (c) 3

(d) 4 (e) 5

30. How many tiles of area 2 cm^2 each will be needed to cover a rectangular hall which measures $4m$ by $2m$?

(a) 40 000 (b) 20 000 (c) 4 000

(d) 2 000 (e) 400

31. 20 men can dig 10 wells for 6 days. How many more days will it take them to dig 15 wells, working at the same rate?

(a) 2 days (b) 3 days (c) 5 days

(d) 6 days (e) 9 days

32. Alex is the 4^{th} tallest and 4^{th} shortest child in his family. If his family consists of his parents and the children, how many members are in his family?

(a) 6 (b) 7 (c) 8

(d) 9 (e) 10

33. A car traveling at average speed of $80km/hr$ moves from Ibadan to Ota in 4 hours. How long will it take the driver on the return journey if the average speed is increased by 25%?

(a) 5 hours (b) 4 hrs, 15 mins (c) 3hrs, 30 mins

(d) 3 hrs, 12 mins (e) 2 hrs, 45 mins

34. Two days before yesterday is three days after Monday. What day of the week is it today?

(a) Sunday (b) Monday (c) Tuesday

(d) Friday (e) Saturday

35. Find the sum of the numbers between 1 and 100 that are both multiples of 2 and 7.

(a) 196 (b) 256 (c) 300

(d) 392 (e) 2 793

36. A cylinder with a cross-sectional area of $112cm^2$ and height $7cm$ is reshaped into a cuboid with base area of $28cm^2$. Find the cuboid's height.

(a) $28cm$ (b) $30cm$ (c) $32cm$

(d) $35cm$ (e) $40cm$

37. Steven scores an average of 23 points over his first five games. How many points must he score in his sixth game to average 25 points over all 6 games?

(a) 2 (b) 24 (c) 30

(d) 35 (e) 45

38. A father left a monetary inheritance for his three sons.

The first son got three-fifths of the money.

The second son got two-sevenths of the remaining money.

The third son got ₦334 000.

How much is the total inheritance?

(a) ₦950 000 (b) ₦1 169 000 (c) ₦1 375 000

(d) ₦2 238 000 (e) ₦2 500 000

39. What must be added to the seventh number to get the tenth number in the sequence 5, 7, 10, 14, 19,…. ?

(a) 23 (b) 24 (c) 25

(d) 26 (e) 27

40. The ratio of the sides of an isosceles triangle is 5:6. Find the smallest possible area of the triangle, given that all the sides of the triangle are whole numbers, and the vertical height of the triangle is also a whole number.

(a) 12 (b) 15 (c) 20

(d) 22 (e) 65

SECTION B

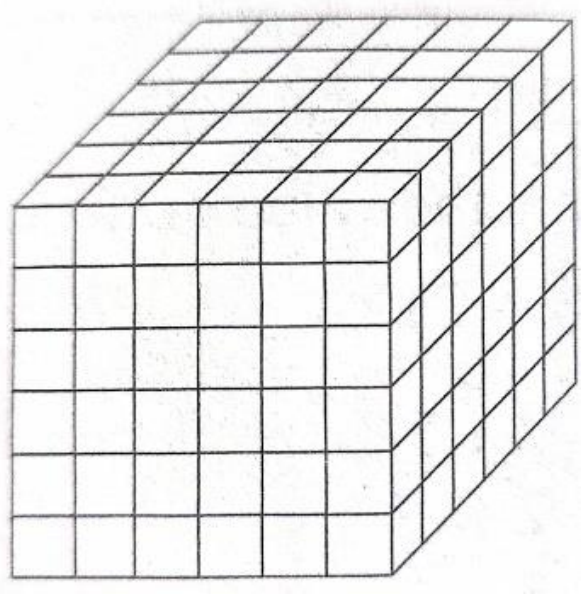
INSTRUCTION: *Answer all questions in this section. Write ONLY the answer to each question in this section in the appropriate space provided in the answer sheet.*

41. Simplify $101 - 99$.

42. Write one billion, one hundred and eleven million, eleven thousand and ten in figures.

43. How many letters are there ***between*** G and M in the English Alphabet?

44. Find the difference between the Highest Common Factor (H.C.F.) and Lowest Common Multiple (L.C.M.) of 15 and 9.



45. How many smaller cubes make up the solid object shown above?

46. Find the sum of all single-digit odd numbers.

47. If the average age of 12 boys is 14 years. What will be the average age if two boys of 14 years each are added to the group?

48. What is the smallest possible length of side (in cm) of a square whose area is equal to its perimeter?

49. How many hours are there between 6:40am on Monday and 4:40pm on Wednesday of the same week?

50. Find the diagonal of a rectangle of perimeter 42cm whose length is $33\frac{1}{3}\%$ longer than the breadth.