



NATIONAL MATHEMATICS TOURNAMENT

Identifying young global stars

STUDY GUIDE

UPPER PRIMARY CATEGORY 2025

1. If \$1 = 47.25 Japanese Yen, how many dollars do you get for 18,900 Japanese Yen? (A) 250 (B) 300 (C) 400 (D) None
2. In a garden of 150 plants, $\frac{1}{4}$ are roses, and $\frac{1}{3}$ are sunflowers. How many plants are other types? (A) 50 (B) 62 (C) 120 (D) 70
3. A bakery produces 960 loaves of bread daily. If $\frac{3}{8}$ of them are whole wheat, how many are not whole wheat? (A) 360 (B) 480 (C) 600 (D) 720
4. Place a decimal point in 54321 so that 2 represents the value of thousandths. (A) 5.4321 (B) 54.321 (C) 543.21 (D) 5432.1
5. Identify the next two numbers in the sequence 169, , 196 ____, ____, 289. (A) 225, 256 (B) 223, 250 (C) 223, 262 (D) None
6. What is the area of a rectangular field with a perimeter of 72m and a width of 12m? (A) $216m^2$ (B) $288m^2$ (C) $324m^2$ (D) $144m^2$
7. A library has 1,200 books. If $\frac{2}{5}$ of them are fiction, how many are non-fiction? (A) 480 (B) 720 (C) 600 (D) 840
8. How many quarters are there in \$15.75? (A) 63 (B) 62 (C) 64 (D) 65
9. If \$1 = 200 Euros, how many dollars do you get for 10,000 Euros? (A) 50 (B) 60 (C) 70 (D) 80
10. Convert 300 hours to days and express it as a fraction of 2 months (April and June) in its simplest form. (A) $\frac{1}{4}$ (B) $\frac{1}{5}$ (C) $\frac{1}{6}$ (D) $\frac{1}{8}$
11. Subtract 0.5678 from the sum of 9 and 0.4322. (A) 8.8644 (B) 8.8646 (C) 8.8648 (D) 8.8650
12. What fraction of 512 is 64 in its simplest form? (A) $\frac{1}{8}$ (B) $\frac{1}{6}$ (C) $\frac{1}{4}$ (D) $\frac{1}{10}$
13. How many times can 0.2 be subtracted from 20? (A) 100 (B) 90 (C) 80 (D) 70
14. What is the area of a square whose perimeter is 56cm? (A) $196cm^2$ (B) $144cm^2$ (C) $121cm^2$ (D) $64cm^2$
15. How many nickels are there in \$4.35? (A) 87 (B) 86 (C) 88 (D) 89
16. What is 75 kobo expressed as a decimal of N5.00? (A) 0.15 (B) 0.25 (C) 0.20 (D) 0.10
17. Find the sum of the smallest and largest numbers in the set: 0.2, 0.5, 0.8, 0.3. (A) 1.0 (B) 1.1 (C) 1.2 (D) 1.3
18. What percentage of \$10.00 is left after spending \$2.50? (A) 75% (B) 80% (C) 70% (D) 60%
19. An item originally priced at \$2,000 was reduced by 20%. What is its new price? (A) \$1,600 (B) \$1,700 (C) \$1,800 (D) \$1,900
20. How long will it take to earn an interest of \$800 on a principal of \$4,000 at 5% per annum? (A) 3 years (B) 4 years (C) 5 years (D) 6 years
21. By how much is 1,000 less than the sum of 850 and 450? (A) 200 (B) 250 (C) 300 (D) 350
22. What is the area of a square whose perimeter is 80cm? (A) $400cm^2$ (B) $625cm^2$ (C) $900cm^2$ (D) $256cm^2$
23. The perimeter of a rectangular field is 100m. If the width is 15m, what is the length? (A) 35m

- (B) 40m (C) 45m (D) 50m
24. From 10, take away $\frac{4}{5}$. (A) $9\frac{1}{5}$ (B) $8\frac{1}{5}$ (C) $7\frac{1}{5}$ (D) $6\frac{1}{5}$
25. If I went to bed at 10:30pm and woke up at 7:15am the next day, how long did I sleep?
(A) 8 hours 45 minutes (B) 9 hours 15 minutes (C) 8 hours 30 minutes (D) 9 hours
26. If it takes 35 minutes to walk to the park and I leave at 3:45pm, what time will I arrive?
(A) 4:15pm (B) 4:20pm (C) 4:25pm (D) 4:30pm
27. If Sarah is 8cm taller than her sister and her sister is 92cm tall, how tall is Sarah?
(A) 100cm (B) 98cm (C) 96cm (D) 94cm
28. Find the sum of the L.C.M and H.C.F of 20 and 30. (A) 50 (B) 60 (C) 70 (D) 80
29. If the distance around a square is 48cm, what is the length of each side? (A) 12cm (B) 10cm
(C) 8cm (D) 6cm
30. Identify the next two numbers in the series 5, 10, 15, 20, __, __. (A) 25, 30 (B) 30, 35 (C) 35, 40
(D) 25, 35
31. How many minutes are there from 10:30pm on Friday to 12:15am on Saturday? (A) 105 (B) 120
(C) 135 (D) 150
32. The product of two numbers is 72. If one of them is 9, what is the other number? (A) 6 (B) 7 (C) 8
(D) 9
33. What is the smallest number you can make out of 7, 3, 9, 2? (A) 2379 (B) 2397 (C) 2739 (D) 2793
34. What is the product of the least and largest prime numbers between 1 and 20? (A) 38 (B) 39
(C) 40 (D) 41
35. From the sum of 8 and $\frac{3}{4}$, take away the sum of $\frac{1}{2}$ and $\frac{1}{4}$. (A) 8 (B) $7\frac{1}{2}$ (C) $7\frac{3}{4}$
(D) $7\frac{1}{4}$
36. Find the percentage profit if an item bought for \$1,200 is sold for \$1,500. (A) 20% (B) 25% (C)
30% (D) 35%
37. What is the breadth of a rectangle whose perimeter is 60m, if its length is 20m? (A) 10m (B) 15m
(C) 20m (D) 25m
38. Find the product of the square root of 144 and the square of 5. (A) 300 (B) 360 (C) 400 (D) 450
39. Subtract 0.3456 from the sum of 7 and 0.6544. (A) 7.3088 (B) 7.3086 (C) 7.3090 (D) 7.3092
40. A car travels 240km in 4 hours. What is its average speed? (A) 50km/h (B) 55km/h (C) 60km/h
(D) 65km/h
41. In a collection of 800 stamps, if John has collected $\frac{1}{5}$ of them, how many stamps does he have?
(A) 120 (B) 160 (C) 200 (D) 250
42. How many nickels are there in 12.50? (A) 250 (B) 240 (C) 260 (D) 220
43. What is the sum of the largest prime number less than 30 and the square root of 81? (A) 38
(B) 40 (C) 42 (D) 44

UPPER PRIMARY CATEGORY 2024

1. There are 264 pupils in a school. $\frac{3}{8}$ of them are girls. How many are boys? (A)165(B)90 (C) $\frac{5}{8}$ (D)99
2. Put a decimal point in 98675 so that 7 will have the value of thousandths. A)9.8675 B)98.675 C)986.75 D)9867.5
3. Find the next two numbers in the sequence 1.25, 1.90, 2.55, ____, ____
A)2.90, 3.25 B)3.20, 3.85 C)3.00, 3.25 D)2.00, 3.00
4. What is the area of a rectangular board in whose perimeter measures 36m with breadth 8m?
A)80cm² B)10m² C)800m² D)80m²
5. There are 720 books in the school library. How many books has John read if he has read $\frac{7}{15}$ of them? A)620 B)336 C)520 D)500
6. How many quarters are there in $\frac{73}{4}$? A) 29 B)4 C) 3 D) 31
7. What is the sum of the largest prime number less than 100 and the square root of 625? A)150 B)120 C)122 D)133
8. If \$1=190 Sri Lankan Rupees, how many dollars do you get for 9025 Sri Lankan Rupees?
A) 42.5 B) 47.5 C) 90 D) None
9. There are 96 roses in the park. $\frac{1}{4}$ are pink, $\frac{3}{5}$ of them are blue. The rest are red. How many red roses are there to the nearest whole in base 2? A) 1111two B) 1110two C) 1001two D) None
10. Convert 312 hours to days and express as a fraction of 2 weeks in its lowest term. (A) $\frac{13}{2}$ (B) $\frac{13}{7}$ (C) $\frac{13}{14}$ (D) $\frac{156}{7}$
11. From MCMLXX, take away CMIV. (A) MLIV (B) MLXVI (C)MLXIV (D) None
12. What fraction of 512 is 16 in its lowest term? A) $\frac{3}{16}$ B) $\frac{16}{512}$ C) $\frac{1}{64}$ D) None
13. How many times can 0.05 be subtracted from 5? A) 1 B) 10 c) 100 D) None
14. What is the area of a square whose perimeter is twice a dozen (in centimeter)? A) 24 B) 36 C) 6 D) 72
15. Which number greater than 90 and less than 150, will leave a remainder of 3 when divided by the square root of 81? A) 100 B) 120 C) 144 D) Not sure
16. How many halves are in 37.75? A) 75 B) 1 C) 74 D) 37
17. What is 25kobo expressed as decimal of N5.00? A) 0.25 B) 0.5 C) 0.05 D) 0.25
18. Divide the sum of $\frac{31}{3}$ and $\frac{21}{2}$ by their difference. A) $\frac{35}{6}$ B) $\frac{5}{6}$ C)7 D) None
19. Find the sum of the least and largest numbers in the given set of numbers: 0.25, 0.5, 0.75, 0.05 A) 0.755 B) 0.8 C) 1 D) None
20. What percentage of N1.50 is left after giving out 105kobo? A)45% B) 30% C) 50% D) 10.5%
21. An article whose original cost price of N2800.00 was reduced by 12%. What is its new price?
A)2,464 B)2,650 C) 2,324 D)336
22. How long will it take to earn an interest of 3,500 on a principal of 5,000 at 5% per annum?
A)28 B)14 C) 12 D) None
23. By how much is CMLXX less than the sum of CMXCIV and CDLXX? (A)CDXCIV (B)CDLXX (C) MCDLXIV (D)XXV
24. What is the area of a square whose perimeter is 40cm? A) 40cm² B) 100 cm² C) 16 cm² D) None
25. The perimeter of a rectangular court is 60m. find the length of the court if the breadth is 6cm.
A) 20cm B) 24cm C) 48cm D) 54cm
26. From 3, take away $\frac{19}{10}$. A) $2\frac{1}{10}$ B) $1\frac{1}{10}$ C) $2\frac{9}{10}$ D) $1\frac{9}{10}$

27. I went to bed at 7.30pm and got up 7.15am the next day. How long was I in bed? A) 10H 45M B) 11H 15M C) 11H 45M D) 12H 45M
28. It takes 19 minutes to walk home from school. If I leave school by 3:45pm, what time will I get home? A) 4:04am B) 4:14pm C) 3:64pm D) 4:04pm
29. If John were 3cm taller, he would be twice the height of his sister. If she is 80cm tall, how tall is John? A) 160cm B) 163cm C) 157cm D) 77cm
30. Find the sum of the L.C.M and H.C.F of 24 and 36. A) 72 B) 12 C) 84 D) 96
31. If the distance around a square is 24cm, what is the length of each side? A) 12CM B) 6CM C) 24CM D) Not sure
32. Find the next two numbers in the series $3\frac{1}{2}$, 5, $6\frac{1}{2}$, 8, $9\frac{1}{2}$, ____ A) 10 B) 11 C) $10\frac{1}{2}$ D) $11\frac{1}{2}$
33. How many minutes are there from 10:45 pm on Monday 2:05pm on Tuesday? A) 920 B) 15 C) 220 D) None
34. The product of two numbers is 42. One of them is 7, what is the other number? A) 6 B) 7 C) 8 D) 9
35. What is the smallest number you can make out of 4,3,7,9? A) 3 B) 3479 C) 23 D) 4379
36. What is the product of the least and largest prime numbers between 1 and 20? A) 19 B) 38 C) 17 D) None
37. Find the sum of the L.C.M and H.C.F of X, XV, and XXX and leave your answer in Roman numeral. A) LX (B) XXV (C) XXXV (D) CL
38. From the sum of 5 and $\frac{3}{5}$, take away the sum of $\frac{2}{3}$ and $\frac{4}{5}$ A) $\frac{16}{5}$ B) $\frac{62}{15}$ C) $4\frac{2}{15}$
39. If you have gotten this far, you are a genius. This is a bonus from Mr. Catalyst. A) Accept B) Decline
40. Find the percentage loss if an item which was bought at N750.00 was sold for N500.00. A) 25% B) 33.3% C) 50% D) 30%
41. What is the breadth of a blackboard whose perimeter is 30m, if its length is twice as long as the breadth? A) 10 B) 20 C) 5 D) 12
42. Find the product of the square root of 625 and the square of 8. A) 1,600 B) 5,000 C) 40,000 D) None
43. Take away 0.4893 from the sum of 9 and 0.432 A) 10.6432 B) 8.9427 C) 0.4591 D) None
44. Reduce N2500 by 40%. A) 2,460 B) 2,000 C) 1,500 D) 2,100
45. What is the difference between the 10th multiple of 16 and 5.56 A) 11.44 B) 154.44 C) 86.6 D) 160.56
46. A school's population is 860. How many boys are there if $\frac{2}{5}$ of the population are girls? A) 344 B) 516 C) 500 D) 463
47. The ages of Grandma, Uncle John and Ruby add up to 105 years. Grandma is twice as old as Uncle John, and Uncle John is twice as old as Ruby. How old is Grandma? A) 80 B) 60 C) 50 D) 63
48. 4, 9, ____, ____, 36 (a) 14,19 (b) 5,10 (c) 16,25 (d) 18,27
49. A dozen of a baker's dozen is how many? (a) 144 (b) 156 (c) 12 (d) 13

UPPER PRIMARY CATEGORY 2023

1. Write the answer to 64×39 in roman numerals (a) CI (b) LXIVXXXIX (c) MMCDXCVI (d) MMCDXXXXVI
2. Simplify XI (CV + XX) (a) MCCCLXXV (b) CXXXVI (c) CXXV (d) none
3. Multiply CMX by XXXII (a) 2,912 (b) 30,432 (c) 29,120 (d) none
4. Find the positive difference between XIX and XXIX (a) IX (b) XI (c) XX (d) X
5. What is DXVI.XCIX? (a) 516.911 (b) 516.99 (c) 516,911 (d) 516.99
6. 1, 2, 4, __, __, 32 (a) 9,15 (b) 6,8 (c) 7,11 (d) 8,16
7. 17, __, __, 38, 45 (a) 19,25 (b) 24,31 (c) 21,29 (d) none
8. 4, 9, __, __, 36 (a) 14,19 (b) 5,10 (c) 16,25 (d) 18,27
9. Find the difference between the LCM and HCF of 12 and 18. (a) 30 (b) 42 (c) 36 (d) none
10. Write 168 as a factor of its prime in index form (a) $22 \times 3 \times 7$ (b) $23 \times 3 \times 7$ (c) $24 \times 3 \times 7$ (d) $22 \times 32 \times 7$
11. Find the square of the HCF of 60 and 84 (a) 16 (b) 144 (c) 516 (d) 64
12. Find the square root of $(22 \times 32) + (23 \times 32) - 23$ (a) 10 (b) 12 (c) 4 (d) none
13. Sum the common factors of 9 and 21 (a) 3 (b) 9 (c) 30 (d) 4
14. One of these is not a multiple of 9 and 14. (a) 126 (b) 252 (c) 512 (d) none
15. What is 23×32 in roman numerals? (a) VI (b) LXXII (c) LIV (d) XXXVI
16. A dozen of a baker's dozen is how many? (a) 144 (b) 156 (c) 12 (d) 13
17. What is the sum of a dozen and a score? (a) 32 (b) 33 (c) 112 (d) 12
18. Add 3 scores and 2 dozen (a) 74 (b) 84 (c) 27 (d) none
19. Multiply a gross by a baker's dozen (a) 1872 (b) 1728 (c) 1782 (d) none
20. Add 2.290, 444.01 and 0.00023 to 2dp (a) 446.30 (b) 446.31 (c) 446.4 (d) 45
21. Find the product of the squares and square roots of 25 (a) 120 (b) 620 (c) 20 (d) 3,125
22. Divide 0.096 by 8 (a) 12 (b) 0.12 (c) 0.012 (d) 120
23. Express $3\frac{3}{8}$ as a decimal (a) 3.38 (b) 3.375 (c) 33.8 (d) 27.8
24. If 1 naira equals 1.45 Cedis, what is the value of 79 naira in Cedis? (a) 115 (b) 114.6 (c) 114.55 (d) none
25. Find the value of $\frac{4}{11}$ of #6.82 (a) 3 (b) 27 (c) 2.48 (d) 6.4
26. Find 12.5% of 2416 (a) 604 (b) 906 (c) 276 (d) 302
27. I bought 20 eggs for #3.00 and sold them for #4.00, what was my percentage gain? (a) 20% (b) 33.3% (c) 25% (d) 12%
28. The LCM of 12, 8 and 4 divided by their HCF is (a) 6 (b) 12 (c) 2 (d) 4
29. Find the sum of the following correct to 3 significant figures: 0.2126 and 0.7145 (a) 0.9271 (b) 0.927 (c) 0.93 (d) none
30. Write 0.125 of a kilometer in meter (a) 125m (b) 12.5m (c) 1.25m (d) 0.00125m
31. Express $\frac{1}{3}$ correct to 3 decimal places (a) 0.33 (b) 0.334 (c) 0.333 (d) 0.334
32. Write in figure, Twenty five million and forty (a) 25,040 (b) 25,000,000,040 (c) 25,000,040 (d) 25,000,000,40
33. What is the place value of 0 in 2044.14 (a) hundredth (b) hundred (c) tens (d) none
34. What percentage of #50 is #13 (a) 63% (b) 37% (c) 26% (d) 650%
35. If the circumference of a circle is 220cm, find its diameter (a) 70 (b) 65 (c) 60 (d) 55

36. Find the cube root of 27 (a) 9 (b) 3 (c) 725 (d) 81
37. Ade is 10 years old and Miracle is half his age. How old will Miracle be when Ade becomes 100 years old? (a) 50 (b) 5 (c) 200 (d) 95
38. Find the height of a trapezium whose area is 36cm^2 and parallel sides are 5cm and 7cm respectively (a) 10 (b) 6 (c) 12 (d) 35
39. Change 1,453 kobo to naira (a) 1,453,000 (b) #1,453 (c) 145,300 (d) 14.53
40. Write 12,000,001,024 in words (a) twelve million, one thousand and twenty four (b) twelve billion one hundred and twenty four (c) Twelve billion, one thousand and twenty four (d) Twelve thousand, one hundred and twenty four
41. Solve 25% of $\frac{1}{2} \div \frac{1}{4}$ (a) $\frac{1}{8}$ (b) $\frac{1}{4}$ (c) $\frac{4}{8}$ (d) $\frac{1}{2}$
42. $\frac{2}{3}$ of $(\frac{1}{2} + \frac{3}{5})$ (a) $\frac{21}{30}$ (b) $\frac{11}{15}$ (c) $\frac{11}{10}$ (d) none
43. Divide 0.5 by 0.25 (a) 0.25 (b) 0.125 (c) 2 (d) 125
44. 50% of $\frac{11}{15}$ (a) $\frac{11}{20}$ (b) $\frac{6}{7}$ (c) $\frac{11}{30}$ (d) none
45. The average population in a district is 2,300 per sqkm . If the district has an area of 130sqkm , what is the population? (a) 299,000 (b) 2,430 (c) 3,000 (d) none
46. Find the area of a circle whose diameter is 14cm (a) 616cm^2 (b) 154cm^2 (c) 44cm^2 (d) none
47. Find the perimeter of a square with 4.63cm as side (a) 16cm (b) 21.4369 (c) 9.26 (d) 18.52
48. The volume of a cylinder is 770cm^3 , if the radius is 7cm, find the height (a) 154cm (b) 22cm (c) 5cm (d) 7cm
49. Multiply two dozen by half a score (a) 24 (b) 240 (c) 144 (d) 72
50. What is the sum of four dozen (a) 16 (b) 12 (c) 48 (d) 4?