EduHeal Foundation

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ICO	NISO	NIMO	NBTO	IEO	IGO	BIFO	NIPO
INTERNATIONAL CYBER OLYMPIAD	NATIONAL INTERACTIVE SCIENCE OLYMPIAD	NATIONAL INTERACTIVE MATH OLYMPIAD	NATIONAL BIOTECHNOLOGY OLYMPIAD	INTERNATIONAL ENGLISH OLYMPIAD	INTERNATIONAL G.K. OLYMPIAD	BSE INTERNATIONAL FINANCE OLYMPIAD	NATIONAL IIT-PMT OLYMPIAD

Level - 1 : All Level-1 successful* participants will get certificate, apititude report and online subscription, and school toppers will be eligible for school hero medals.

Level - 2 : School toppers* will be selected for level-2-National level - online computer based interactive test held at exam centres all over India. Besides selection for level-3, winner will get merit certificate, medals, educational CDs, laptop, scholarship and other prizes. There is no level 2 in Art, Cricket, Cyber, NIPO and Biotech.

Level - 3 : Toppers will qualify# for level 3-International level-where you will compete with students globally. Get selected for EHFs International Olympiad training camp. Only Indian organization giving students exposure to global competitions. Represent India & win laurels. Guidance by top scientists. Prizes ranges from cash (millions of $), gadgets, foreign trips, publicity, fame, scholarships, Internships, conference participation and more.

* # See prospectus/website for details

EHF

NATIONAL INTERACTIVE MATHS OLYMPIAD

NIMO

8 Class

B1 Paper Code

LEVEL-1

1. **You are allowed additional 10 minutes to fill the required details in the RESPONSE SHEET (OMR).**
2. **The question paper is made as per syllabus guidelines & pattern given in the information Booklet. The Question Paper for Classes 1 to 6 contains 25 Questions each to be answered in 40 minutes. The Question paper for classes 7 to 12 contains 50 Questions each to be answered in 60 minutes. All questions are compulsory. Further instructions are given in the instruction letter to the teacher.**
3. **Use the response sheet to mark your responses by darkening the required circle. The response sheet has to be returned to the foundation, duly filled in. THE STUDENT CAN RETAIN THE QUESTION PAPER.**

MENTAL ABILITY

1. How many right angles in a square?

(1) 2
(2) 4
(3) 1
(4) None of these

2. If you had 785 dogs. How many would you have if I took 524?

(1) 261 (2) 326
(3) 162 (4) None of these

3. The simplest form of 1.5: 2.5 is _____.

(1) 6 : 10 (2) 15 : 25
(3) 3 : 5 (4) None of these

4. What is 1004 divided by 2?

(1) 52 (2) 502
(3) 520 (4) None of these

5. The number of 3-digit numbers divisible by 6, is _____.

(1) 149 (2) 166
(3) 150 (4) None of these

6. The average of first 50 natural numbers is _____.

(1) 25.30 (2) 25.5
(3) 25.00 (4) None of these

7. Find the value of x; if $x = (2 \times 3) + 11$.

(1) 15 (2) 17
(3) 66 (4) None of these

8. If a number has an even number or zero at its unit place; the number is always divisible by

(1) 2
(2) 5
(3) 3
(4) None of these

9. Simplify: $150 \div (6 + 3 \times 8) - 5$

(1) 2 (2) 5

(3) 0 (4) None of these

10. Name a triangle whose two angles are equal.

(1) Right angle triangle (2) Isosceles triangle

(3) Scalene triangle (4) None of these

MATHEMATICS

11. Which sign makes the statement true?

3/5 ☐ 5/8

(1) > (2) <

(3) = (4) None of these

12. Fill in the blank:

$\frac{1}{5} \div (—) = -35/18$

(1) $\frac{-21}{36}$ (2) $\frac{-12}{19}$

(3) $\frac{-3}{14}$ (4) None of these

13. Reena has marbles of different colours-green, red, yellow and blue. Out of these marbles, 25% are green , 19% are red, 22% are yellow and remaining marbles are blue. Reena has a maximum number of which colour marbles?

(1) Yellow (2) Blue

(3) Red (4) None of these

14. If the sum of three consecutive odd numbers is 33, then what is the mean of this number?

(1) 9 (2) 10

(3) 11 (4) None of these

15. The selling price of goods which cost ₹ 10 and were sold at a gain of 10 % is

(1) ₹ 12 (2) ₹ 11.10

(3) ₹ 11 (4) None of these

16. A sum of money amounts to ₹ 9800 after 5 years and ₹ 12005 after 8 years at the same rate of simple interest. The rate of interest per annum is:

(1) 5% (2) 8%

(3) 12% (4) None of these

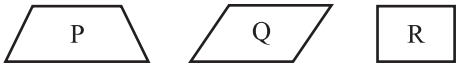
17. The sum of the digits of a 2- digit number is 9. If the digits are interchanged, then the resulting number is 9 less than the original number. What is the original number?

(1) 72 (2) 54

(3) 63 (4) None of these

18. Which of the following figures satisfy the following properties?

- All sides are congruent.
- All angles are right angles.
- Opposite sides are parallel.



(1) P (2) Q

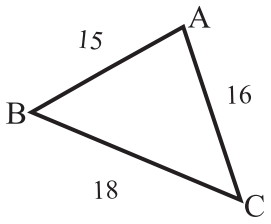
(3) R (4) None of these

19. The number of sides of a regular polygon where each exterior angle has a measure of 45° is

(1) 8 (2) 10

(3) 4 (4) None of these

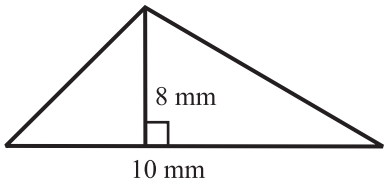
20. What kind of triangle is this?



(1) Isosceles (2) Scalene

(3) Equilateral (4) None of these

21. What is the area of the given triangle?



(1) 40 sq mm. (2) 80 sq mm

(3) 160 sq mm (4) None of these

22. A square board has an area 144 square units. How long is each side of the board?

(1) 11 units (2) 12 units

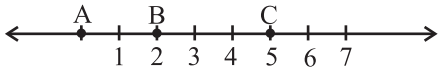
(3) 13 units (4) None of these

23. A perfect square can never have the following digit in its ones place.

(1) 1 (2) 8

(3) 0 (4) None of these

24. Which letter best represents the location of $\sqrt{25}$ on a number line?

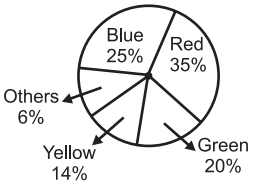


(1) A (2) B

(3) C (4) None of these

Students of a class voted for their favourite colour and a pie chart was prepared based on the data collected

Observe the pie chart and answer questions 25-27 based on it.



25. Which colour received $\frac{1}{5}$ of the votes?

(1) Red (2) Blue

(3) Green (4) None of these

26. If 400 students voted in all, then how many did vote "others" colour as their favourite?

(1) 6 (2) 20

(3) 24 (4) None of these

27. Which of the following is a reasonable conclusion for the given data?

(1) Green is the least popular colour

(2) Number of students liking together yellow and green colour is approximately the same as those for red colour

(3) The number of students who voted for red colour is two times the number of students who voted for yellow colour

(4) None of these

28. The marked price of an article is ₹ 80 and it is sold at ₹ 76, then the discount rate is

(1) 5% (2) 95%

(3) 10% (4) None of these

29. If 60% of x is 1200, then the value of 'x' is

(1) 1000 (2) 2000

(3) 3000 (4) None of these

30. In a polynomial, the exponents of the variables are always

(1) integers

(2) positive integers

(3) non-negative integers

(4) none of these

31. The common factor of $3ab$ and $2cd$ is

(1) 1 (2) –1

(3) a (4) none of these

32. What do we require to construct a quadrilateral if lengths of four sides are given?

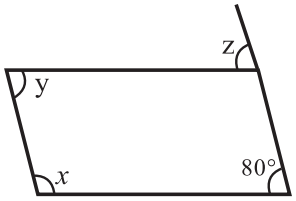
(1) One of the angle

(2) Length of a diagonal

(3) Length of two diagonals

(4) None of these

33. Find the value of x.



(1) 90° (2) 70°

(3) 100° (4) None of these

34. What is the cube of double of 'a'?

(1) $4a^2$ (2) $16a^3$

(3) $8a^3$ (4) None of these

35. By what least number 4320 be multiplied to obtain a number which is a perfect cube?

(1) 10 (2) 20

(3) 50 (4) None of these

36. What is the area of the largest triangle that can be fitted into a rectangle of length l unit and width w unit?

(1) $lw/2$ (2) $lw/3$

(3) $lw/4$ (4) none of these

37. What is the HCF of $2x^2y$ & $3xy^2$?

(1) $6xy$ (2) $6x^2y^2$

(3) xy (4) None of these

38. If each side of an equilateral triangle is doubled, then its area becomes how many times?

(1) 2 (2) 4

(3) 8 (4) None of these

39. If the height of a cylinder is halved, its volume becomes how many times?

(1) 1/2 (2) 1/3

(3) 2 (4) None of these

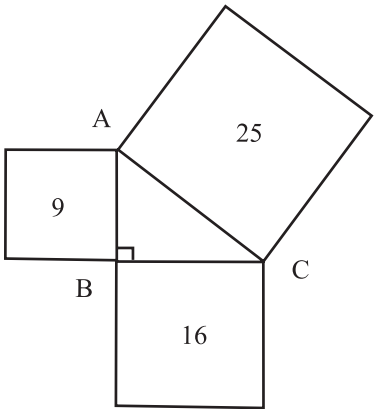
40. If x be any non-zero integer and m, n be negative integers, then $x^m \times x^n$ is equal to

(1) x^{m+n} (2) x^{m-n}

(3) 1 (4) none of these

INTERACTIVE SECTION

41. As shown in figure below, the area of three squares are given. Find the perimeter of ΔABC.



(1) 12 units (2) 12.5 units

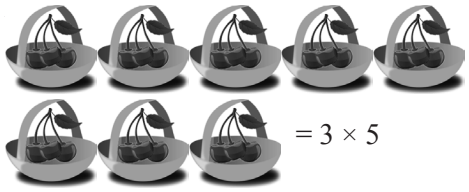
(3) 19.5 units (4) None of these

42. Rohan and Shalu are playing with 5 cards as shown in the figure. What is the probability of Rohan picking a card without seeing, that has the number 2 on it.

(1) $\frac{2}{5}$ (2) $\frac{1}{5}$

(3) $\frac{3}{5}$ (4) None of these

43. $5 \times 3 = 3 \times 5$



Which law is shown in the figure?

(1) Distributive law of multiplication

(2) Associative law of multiplication

(3) Commutative law of multiplication

(4) None of these

44. Which number appears same if read in conventional manner or reverse manner?

(1) 1919 (2) 1961

(3) 1991 (4) None of these

45. A boy celebrates his birthday only after every four years. What is his date of birth?

(1) 31 December (2) 28 February

(3) 29 February (4) None of these

46. The small hand of a clock is at 12 and the large hand makes an angle of 90 degree with the small hand. What is the time in the clock?

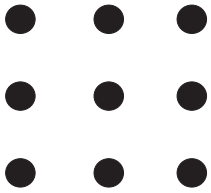
(1) Twelve past fifteen minutes

(2) Half past twelve

(3) Twenty Minutes past twelve

(4) None of these

47. How many squares can be drawn from the dots given in the figure?



(1) 4 (2) 5

(3) 6 (4) None of these

48. Which 2-digit number is equal to the area and perimeter of a square?

(1) 16 (2) 25

(3) 81 (4) None of these

49. The sum of all central angles in a pie chart is

(1) 180° (2) 360°

(3) 0° (4) None of these

50. Look at this square

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

A coin was placed at 4.

It was moved three(3) places to the left; two(2) places down and one(1) place to the right.

On which numbered square is the coin?

(1) 9 (2) 10

(3) 11 (4) None of these

END OF THE EXAM