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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

7 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. Mohan is 18th from either end of a row of boys. How many boys are there in that row?

(1) 26 (2) 32

(3) 35 (4) None of these

2. What should come in the place of question mark in the following series?

3, 8, 6, 14, ?, 20

(1) 11 (2) 10

(3) 9 (4) None of these

3. How many 5's are there in the following sequence of numbers which are immediately preceded by 7?

8 9 5 3 2 5 3 8 5 5 6 8 7 3 3 5 7 7 5 3 6 5 3 3 5 7 3 8

(1) One

(2) Two

(3) Three

(4) None of these

4. The records of a sporting goods company shows that 4 out of every 100 footballs manufactured have some defect. The probability of drawing a football that will not have a manufacturing defect is _____.

(1) $\frac{1}{4}$ (2) $\frac{24}{25}$

(3) $\frac{1}{25}$ (4) None of these

5. What is the sum of first two prime numbers?

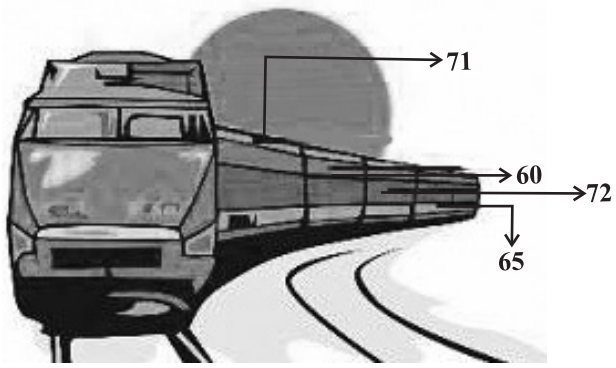
(1) 7

(2) 5

(3) 3

(4) None of these

6. The numbers shown in the figure give number of passengers in each compartment. Then total number of passengers in the train is:



(1) 137 (2) 268

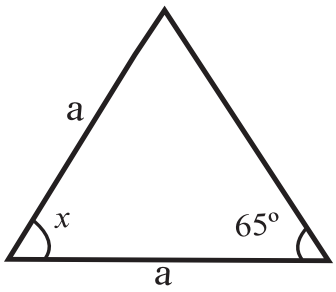
(3) 286 (4) None of these

7. The number of trees in different parks of a city are 33,38, 48, 33, 34, 34, 33 and 24. The mode of this data is

(1) 24 (2) 34

(3) 33 (4) None of these

8. Find the value of x in the given triangle



(1) 50°

(2) 65°

(3) 180°

(4) None of these

9. A wildlife sanctuary currently houses 7 owls for every 2 groundhogs. If there are 8 groundhogs at the sanctuary, how many owls are there?

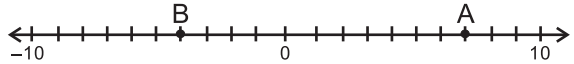
(1) 14 owls

(2) 16 owls

(3) 28 owls

(4) None of these

10. By observing the number line, state which of the following statements is not true.



(1) B is greater than A

(2) B is greater than –10

(3) A is greater than 0

(4) None of these

MATHEMATICS

11. Find: 39 + (– 49) = _____

(1) 10 (2) – 10

(3) 11 (4) None of these

12. The value of A in $-19 \times [4 \times (-2)] = -19 \times 4 + (-19) \times A$ is

(1) – 2 (2) .2

(3) 4 (4) None of these

13. Which integer represents this scenario?

Removing 10 plates from a stack.

(1) –10 (2) 10

(3) 0 (4) None of these

14. Solve: $2 - \frac{3}{5} = \square$

(1) $\frac{7}{5}$ (2) $\frac{1}{5}$

(3) $\frac{-1}{5}$ (4) None of these

15. The exponential form of 729 is _____.

(1) 3^4 (2) 3^5

(3) 3^6 (4) None of these

16. x exceeds 3 by 7, can be represented as

(1) $x + 3 = 2$ (2) $x + 7 = 3$

(3) $x - 3 = 7$ (4) none of these

17. If a and b are positive Integers, then the solution of the equation $ax = b$ will always be a

(1) Positive number

(2) Negative number

(3) 0

(4) None of these

18. Find the value of n in the equation

$4(n - 7) = 4$

(1) 9 (2) 8

(3) 7 (4) None of these

19. If I add three-eight to one-eight of a number, I get zero. The number is _____.

(1) 0 (2) 3

(3) –3 (4) None of these

20. An algebraic expression containing three terms is called a

(1) monomial

(2) binomial

(3) trinomial

(4) none of these

21. The number of scarfs of length half metre that can be made from y metres of cloth is:

(1) $2y$

(2) $y/2$

(3) $y + 1/2$

(4) None of these

22. The value of 36% as in decimal form is

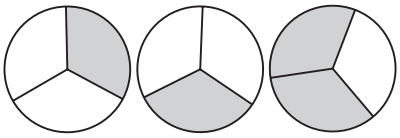
(1) 0.36

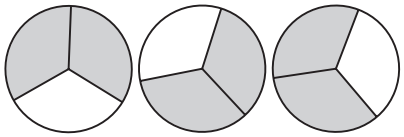
(2) 0.45

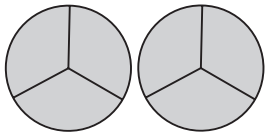
(3) 0.46

(4) None of these

23. Pictorial representation of $3 \times 2/3$ is:

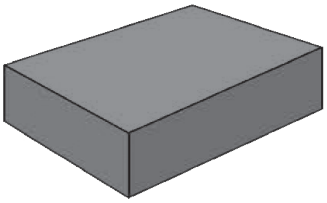
(1) 

(2) 

(3) 

(4) None of these

24. In the figure below, the name of the three-dimensional solid shape is



(1) Sphere

(2) Cone

(3) Cuboid

(4) None of these

25. Charge given on borrowed money is

(1) Principal

(2) Interest

(3) Amount

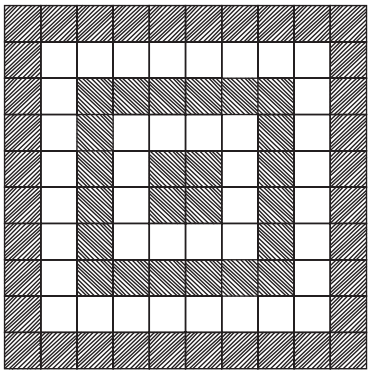
(4) None of these

26. Acid and water are mixed in the ratio 2: 9. Find the quantity of acid in 66 litres of dilute acid

(1) 12 litres (2) 11 litres

(3) 6 litres (4) None of these

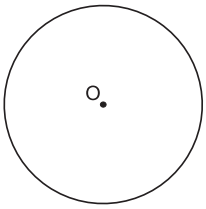
27. The percent that represents the unshaded region in the figure.



(1) 75% (2) 50%

(3) 40% (4) None of these

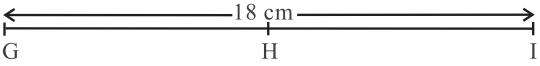
28. How many lines of symmetry are there in a circle?



(1) 2 (2) Countless

(3) 4 (4) None of these

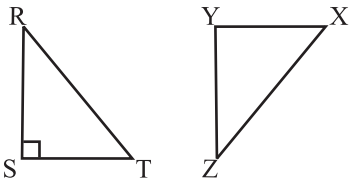
29. Point H is the midpoint of $\overline{GI}$. If $\overline{GI}$ is 18 centimetres long, what is the length of $\overline{HI}$?



(1) 18 cm (2) 9 cm

(3) 8 cm (4) None of these

30. Triangle RST is similar to triangle XYZ.



$\overline{RS}$ corresponds to which side of triangle XYZ?

(1) $\overline{XZ}$

(2) $\overline{YZ}$

(3) $\overline{XY}$

(4) None of these

31. What value of W makes this addition number sentence true?

$$\boxed{W} + 57 = 57 + 38$$

(1) 57

(2) 95

(3) 38

(4) None of these

32. Which sign makes the statement true?

$$3.8 - 1.1 \square 3.6$$

(1) >

(2) <

(3) =

(4) none of these

33. What is this?

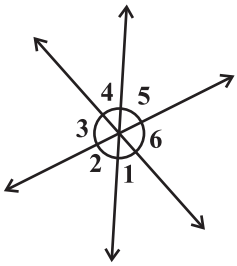
(1) Line

(2) Line segment

(3) Ray

(4) None of these

34. Other than itself, which angle is congruent to $\angle 3$?



(1) $\angle 6$ (2) $\angle 4$

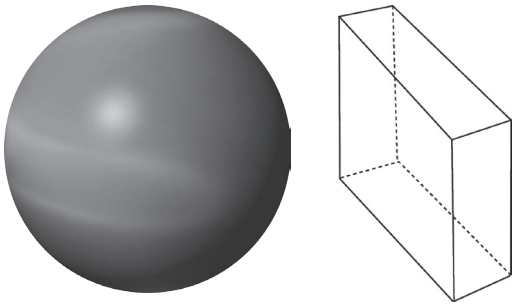
(3) $\angle 2$ (4) None of these

35. Which of the following has a horizontal line of symmetry?

(1) P (2) 3

(3) M (4) None of these

36. Which shape has more faces?



(1) Sphere

(2) Rectangular prism

(3) They both have the same number of faces

(4) None of these

37. Students of Secondary School wrote and submitted poems for a district-wide writing contest.

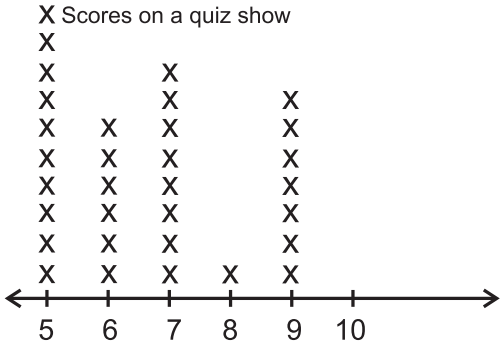
Writing Poem	
Poems Written	**Frequency**
1	2
2	1
3	9
4	19

How many students wrote atleast 2 poems?

(1) 1 (2) 10

(3) 29 (4) None of these

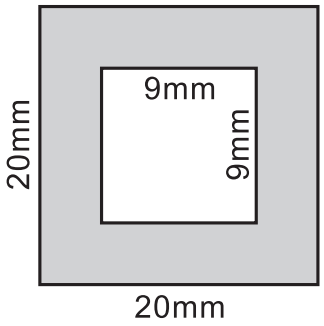
38. A game show programme recorded the score of its contestants.



(1) 1 (2) 25

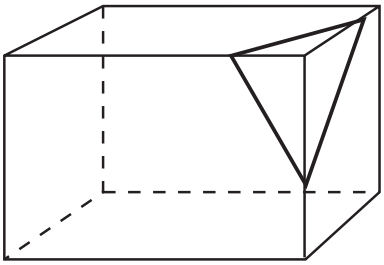
(3) 4 (4) None of these

39. What is the area of the shaded region?



(1) 319 sq. mm
(2) 400 sq. mm
(3) 81 sq. mm
(4) None of these

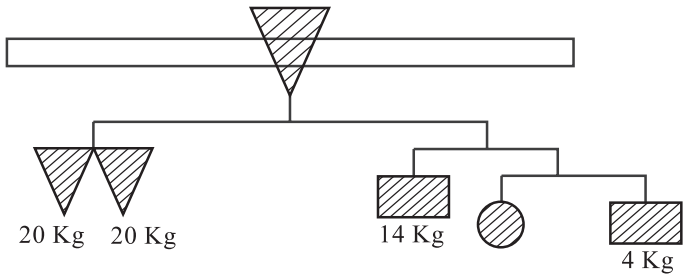
40. When we cut a corner of a cube as shown in the figure, we get the cutout piece as:



(1) Square pyramid
(2) Trapezium prism
(3) Triangular Pyramid
(4) None of these

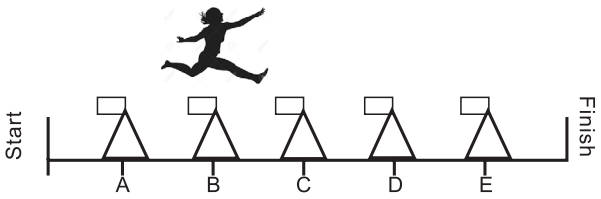
INTERACTIVE SECTION

41. The given figure represents a weighing balance. The weights of some objects in the balance are given. Find the weight of the circle.



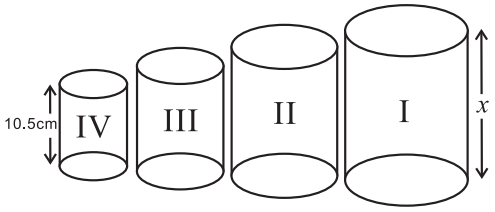
(1) 20 Kg
(2) 22 Kg
(3) 18 Kg
(4) None of these

42. In a hurdle race, Neeti is over hurdle B and 2/6 of the way through the race, as shown in the figure. Where will Neeti be when she is 5/6 of the way through the race?



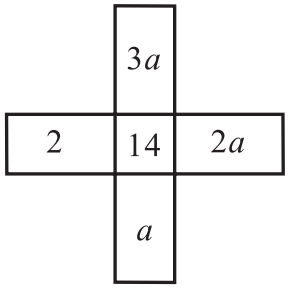
(1) C
(2) D
(3) E
(4) None of these

43. There are 4 containers that are arranged in the ascending order of their heights. If the height of the smallest container given in the figure is expressed as $\frac{7}{25}x = 10.5$ cm. Find the height of the largest container.



(1) 37.5 cm
(2) 10.5 cm
(3) 7/25 cm
(4) None of these

44. If number in the centre is the sum of all other numbers, find the value of a.



(1) 1
(2) 0
(3) 2
(4) None of these

45. Double the number '8' and take away 5 from the answer. What will the number now be?

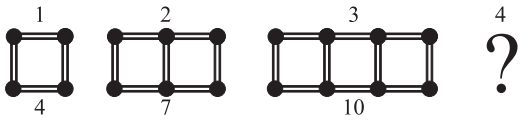
(1) 9

(2) 10

(3) 11

(4) None of these

46.



4 matchsticks are used to make 1 square.

7 matchsticks are used to make 2 squares.

10 matchsticks are used to make 3 squares.

How many matchsticks are used to make the 4th figure?

(1) 12

(2) 13

(3) 14

(4) None of these

47. Find the mystery number.

X	Y

- This is a 2-digit number.
- X is double than Y.
- X + Y = 9

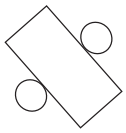
(1) 45

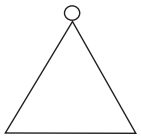
(2) 36

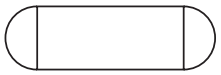
(3) 63

(4) None of these

48. Which of the following nets is a net of a cylinder?

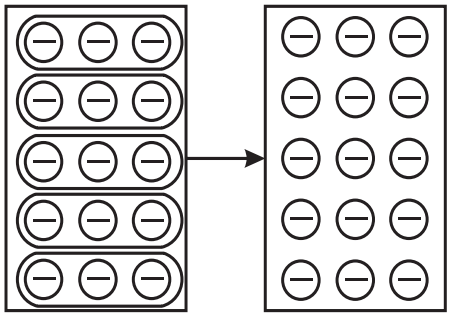
(1) 

(2) 

(3) 

(4) None of these

49. Which number sentence is represented by this method?



Key
⊕ = + 1 ⊖ = + 1

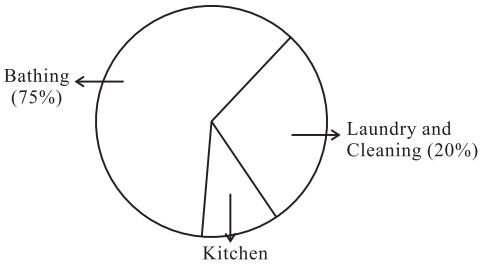
(1) – 3.5 = 15

(2) – 3. (–5) = 15

(3) – 3.5 = –15

(4) None of these

50. A graph shows the consumption of water used in a family if a family uses 1800 litres of water each day. What is the total litres of water used in the kitchen each day?



(1) 90 *l*

(2) 180 *l*

(3) 900 *l*

(4) None of these

END OF THE EXAM