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**NATIONAL
INTERACTIVE
MATHS
OLYMPIAD**

NIMO

6
Class

B1
Paper
Code

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Creating
SUCCESS
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A Unit of EDUSYS LEARNING MEDIA

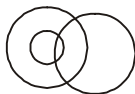
AIEEE • IIT • PMT • OLYMPIADS

IMPORTANT INFORMATION

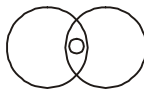
- You are allowed additional 10 minutes to fill the required details in the **RESPONSE SHEET**.
- The question paper is made as per syllabus guidelines & pattern given in the information Booklet. The Question Paper for Classes 1 to 6 contains 25 Questions each to be answered in 40 minutes. The Question 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 coordinator teacher.
- 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

- Mohan started from a place. After walking for a kilometre, he turns to the left, then walking for a half km he again turns to left. Now, he is going Eastward direction. In which direction, did he originally start?
 - West
 - East
 - South
 - None of these
- Women, Married persons, Wives who work, have certain relationship among them. The same relationship is expressed by which sets of circles.



(A)



(B)

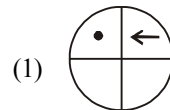


(C)

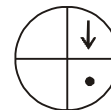


(D)

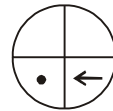
- A
 - B
 - D
 - None of these
- 3 figures are given. One of these figures does not fit with the rest of the figures. Find out that figure else mark (4).



(1)



(2)



(3)

(4) None of these

- Find the odd one out.



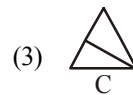
(1)

D



(2)

B



(3)

C

(4) None of these

- If + means \div , \times means $-$, \div means \times and $-$ means $+$, then $8 + 6 \times 4 \div 3 - 4 = ?$

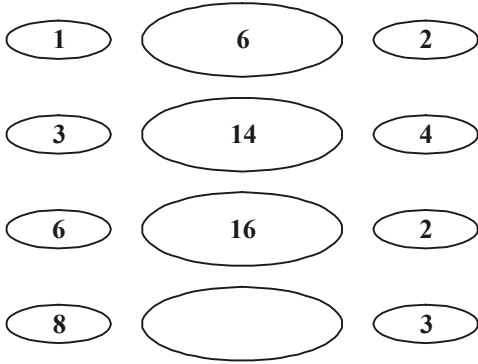
(1) -12

(2) $-\frac{20}{3}$

(3) $\frac{20}{3}$

(4) None of these

6. Which number replaces the blank?

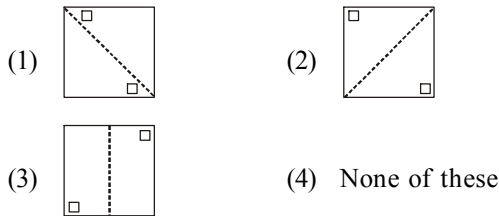


- (1) 22 (2) 20
(3) 24 (4) None of these

7. If bangle is called cassette, cassette is called table, table is called game and game is called cupboard, then which is played in the tape recorder?

- (1) Bangle (2) Cassette
(3) Table (4) None of these

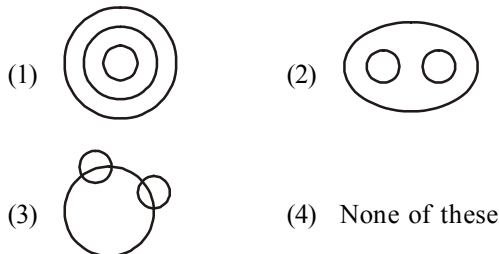
8. In which of the following figures does the dotted line represent the figure's line of symmetry?



9. Raju left home for the bus stop 15 minutes earlier than usual. It takes 10 minutes to reach the stop. He reached the stop at 8.40 a.m. What time does he usually leave home for the bus stop?

- (1) 8 : 30 a.m. (2) 8 : 45 a.m.
(3) 8 : 55 a.m. (4) None of these

10. Which one of the following diagrams correctly illustrates the relationship among the classes : living beings, animals, plants



MATHEMATICS

11. Choose odd one.

- (1) $\frac{12}{36}$ (2) $\frac{10}{30}$
(3) $\frac{11}{32}$ (4) None of these

12. $\frac{1}{5}$ of 37 = $\frac{A}{5}$

Choose the correct value of A & B :

- (1) 7, 2 (2) 5, 2
(3) 7, 5 (4) None of these

13. In Greenland the temperature was -7°C . After a snowfall, it fell by 5°C . What was the new temperature?

- (1) -12°C (2) 12°C
(3) -2°C (4) None of these

14. Find the maximum number :

- (1) 1.03 (2) 0.45
(3) 1.21 (4) None of these

15. Find the minimum number :

- (1) 1.061 (2) 1.06
(3) 1.016 (4) None of these

16. Round off to the nearest 100.



- (1) 800 (2) 900
(3) 80 (4) None of these

17. Round off to the nearest 10000.



- (1) 3800 (2) 39,000
(3) 38,000 (4) None of these

18. Len is 9 years old. His father is 4 times as old as he is. Grandpa is 30 years older than Len's dad. How old is Grandpa?

- (1) 34 (2) 36
(3) 66 (4) None of these

19. The greatest 7-digit number is _____

- (1) 1000000 (2) 9999999
(3) 7777777 (4) None of these

20. The greatest prime number less than 100 is _____

- (1) 97 (2) 99
(3) 93 (4) None of these

21. Convert 10°C into Fahrenheit.

- (1) 18°F (2) 32°F
(3) 50°F (4) None of these

22. What does 0°C equal on the Fahrenheit scale?

- (1) 18°F (2) 32°F
(3) 0°F (4) None of these

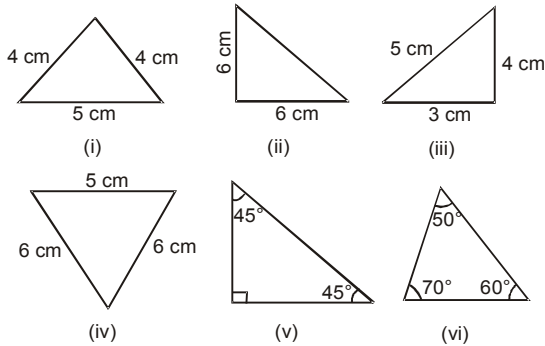
23. A bag contains four blue, two red, and three pink balls. The number of pink balls is what fraction of the total number of balls?

- (1) $\frac{5}{9}$ (2) $\frac{1}{9}$
(3) $\frac{3}{9}$ (4) None of these

24. Which of the following fractions is not in its simplest form?

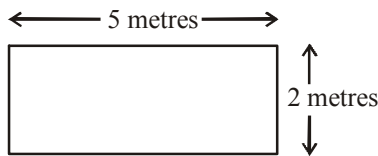
- (1) $\frac{25}{125}$ (2) $\frac{21}{25}$
 (3) $\frac{5}{19}$ (4) None of these

25. How many isosceles triangles are shown in the given set of figures?



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

26. Meena wants to fill the long jump pit with sand about 0.3 metres deep.



How much sand does she need?

- (1) 30 cubic metres (2) 20 cubic metres
 (3) 3 cubic metres (4) None of these

27. $\frac{2}{\square} = \frac{\square}{18}$

- $\square =$
 (1) 3 (2) 6
 (3) 36 (4) None of these

28. Bill takes a strip of thin wire 48 cm long and bends it to form a rectangle. The two ends of the wire neatly join.

- If Bill's rectangle is 8 cm wide, its length is
 (1) 42 cm (2) 16 cm
 (3) 32 cm (4) None of these

29. A millimetre is one thousandth of a metre. So a 'milliyear' would be one thousandth of a year.

- The length of a 'milliyear' would be closest to
 (1) 10 hours (2) 1 day
 (3) 1 hour (4) None of these

30. Eva wanted to use her calculator to find 0.6×18.4 , but the decimal point button was broken. So she found instead that $6 \times 184 = 1104$.

- The correct answer to 0.6×18.4 is
 (1) 0.1104 (2) 1.104
 (3) 11.04 (4) None of these

31. Nadia wanted to add 70 to a number, but subtracted 70 by mistake. Her answer was 140.

- What should her answer have been?
 (1) 280 (2) 70
 (3) 210 (4) None of these

32. The sum of 2^0 , 3^0 and 4^0 is :

- (1) 0 (2) 1
 (3) 3 (4) none of these

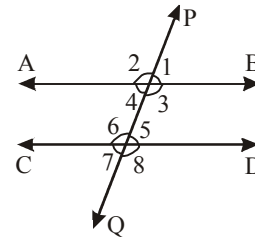
33. The square root of 0.04 is :

- (1) 0.002 (2) 0.02
 (3) 0.2 (4) None of these

34. At a book stall, a discount of $x\%$ was allowed on each book. A book was purchased by a customer for Rs y , its marked price was :

- (1) $Rs \frac{100y}{100-x}$ (2) $Rs \frac{100y}{100+x}$
 (3) $Rs xy$ (4) None of these

35. A transversal PQ intersects two parallel lines AB and CD as shown in the adjacent figure. A pair of alternate angles is :



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

36. The total surface area of a closed right circular cylinder of radius 3.5 m and height 7 m is :

- (1) $308 m^2$ (2) $154 m^2$
 (3) $231 m^2$ (4) None of these

37. Which expression is next in the pattern?

- $2bc, 8bc^2, 32bc^3, \dots$
 (1) $128 b^2 c^4$ (2) $128 bc^4$
 (3) $64 bc^4$ (4) None of these

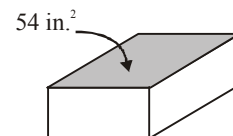
38. A triangle has a perimeter of 36 centimeters. If the length of each side is increased by 50%, the new perimeter will be

- (1) 72 cm (2) 24 cm
 (3) 54 cm (4) None of these

39. If $x = (-2)^3$, which expression is equal to $(-2)^9$?

- (1) x^3 (2) x^6
 (3) x^{12} (4) None of these

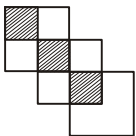
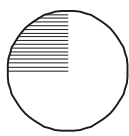
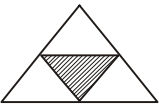
40. The area of the top face of a rectangular prism is 54 square inches



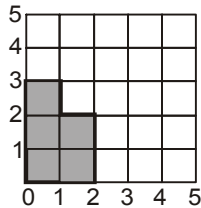
If its volume is 162 cubic inches, which could be the dimensions of the rectangular prism

- (1) 2 in. \times 3 in. \times 18 in (2) 3 in. \times 27 in. \times 9 in
 (3) 3 in. \times 6 in. \times 9 in (4) None of these

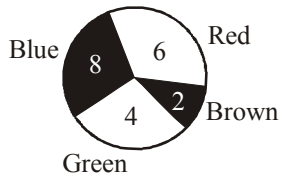
41. In which figure does the shaded part represents 0.3?

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

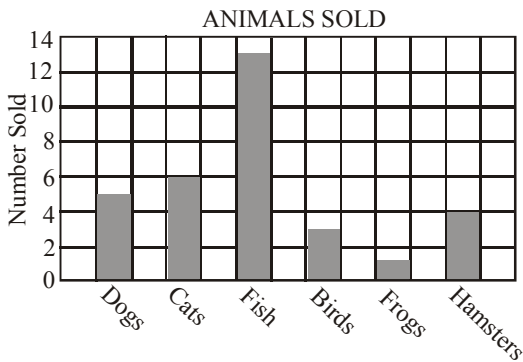
42. What is the perimeter of the shaded area?



- (1) 10 units (2) 8 units
 (3) 5 units (4) None of these
43. You ask 20 of your friends what their favourite colour is? The circle graph below shows how many friends picked each colour. What percent of your friends picked red?



- (1) 15% (2) 20%
 (3) 30% (4) None of these
44. The given bar graph shows the number of animals sold at the pet store during the week.

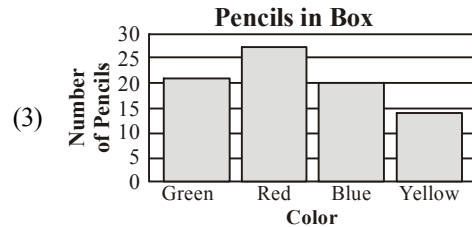
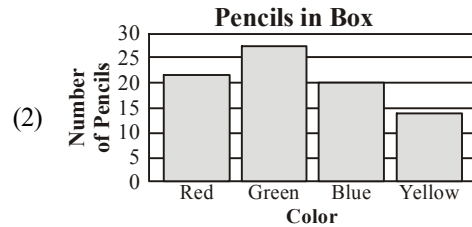
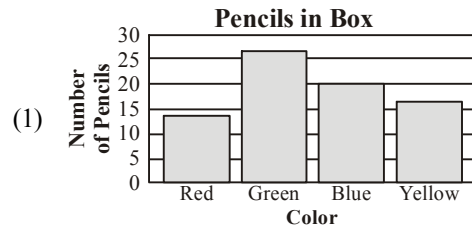


- Which of these statements is true from the information in the graph?
- (1) fewer cats were sold than fish
 (2) the same number of dogs and cats were sold
 (3) more frogs were sold than fish
 (4) None of these

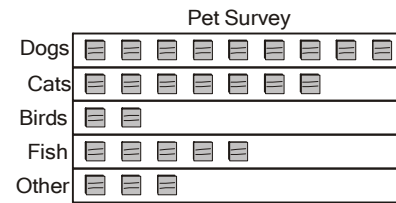
45. The table below shows the number of each color pencil in a box.

Color	Number in Box
Red	13
Green	26
Blue	20
Yellow	16

Which graph below shows the correct number of pencils in the box?



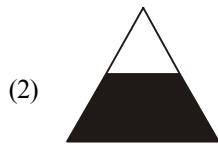
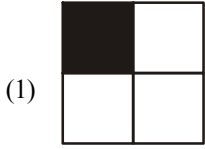
- (1) None of these
46. Hari and Sunil did a survey to find the number of different pets owned by students at their school. The results are shown in the pictograph below.



Each  Means 5 pets

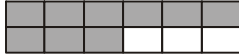
- What is the total number of dogs and cats owned by the students of Hari and Sunil's school?
- (1) 90 (2) 35
 (3) 80 (4) None of these

47. In which of the following does the shaded part represent one third of its whole?



(4) None of these

48. The models are shaded to show that :



(1) $\frac{9}{12} > \frac{3}{6}$

(2) $\frac{9}{12} < \frac{3}{6}$

(3) $\frac{9}{12} = \frac{3}{6}$

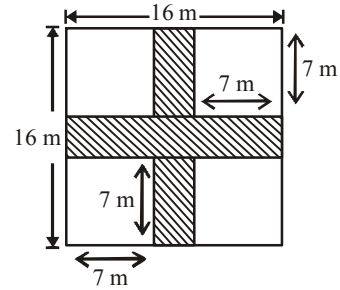
(4) None of these

49. If $\blacksquare \blacksquare \blacksquare \blacksquare \blacksquare \blacksquare$ stands for 30 then $\blacksquare \blacksquare$ will stand for...

- (1) 6
(3) 12

- (2) 10
(4) None of these

50. The area of the shaded region in the figure is



- (1) 207 m^2
(3) 60 m^2

- (2) 158 m^2
(4) None of these



END OF THE EXAM

ROUGH PAGE