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INTERACTIVE OLYMPIADS

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Creating SUCCESS Stories

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AIEEE • IIT • PMT • OLYMPIADS

NATIONAL INTERACTIVE MATHS OLYMPIAD

NIMO

8 Class

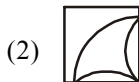
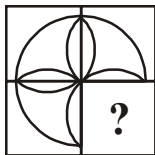
B1 Paper Code

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.

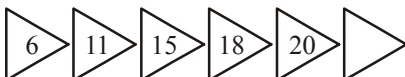
MENTAL ABILITY

- 15 years ago the difference between the age of two persons is 10 years. The elder one was twice as old as the younger one. The present age of the elder person is :
(1) 25 years (2) 35 years
(3) 45 years (4) None of these
- Complete the missing portion of the given pattern by selecting from the given alternatives.



(4) None of these

- Which number goes in the last of the sequence?



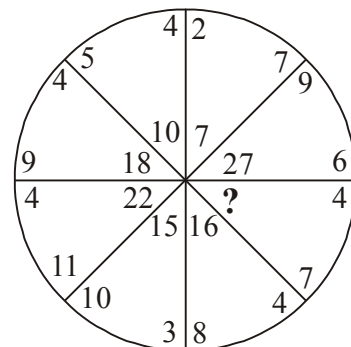
- (1) 23 (2) 22
(3) 21 (4) None of these

- Which number should be added to the empty circle?



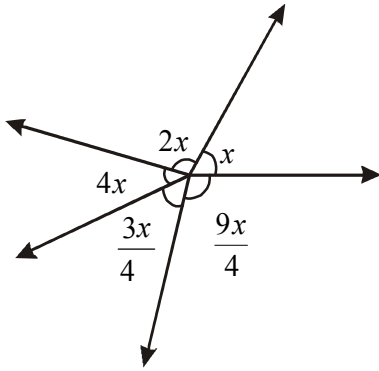
- (1) 2 (2) 1
(3) 3 (4) None of these

- Which number is missing?



- (1) 14 (2) 16
(3) 18 (4) None of these

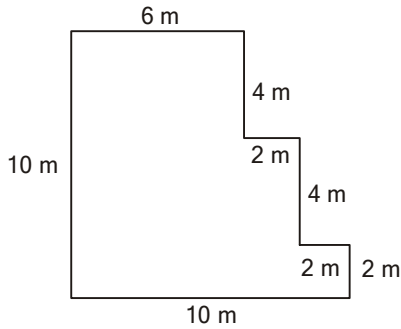
24. The present population of a town is 3,20,000. If it increases at the rate of 5% p.a., what will be the population after two years?
 (1) 3,52,80 (2) 3,528
 (3) 3,52,800 (4) None of these
25. Two numbers are in the ratio 8 : 3 and their sum is 132. Find the numbers.
 (1) 80, 30 (2) 96, 36
 (3) 90, 30 (4) None of these
26. The area of an equilateral triangle is $36\sqrt{3}$ sq m. Find the length of its sides.
 (1) 12 m (2) 16 m
 (3) 36 m (4) None of these
27. If the sides of a square is doubled, what happens to the area?
 (1) Becomes 4 times (2) Becomes 2 times
 (3) Becomes 8 times (4) None of these
28. Find the value of x in the following figure :



- (1) 40 (2) 36
 (3) 18 (4) None of these
29. Find the value of x in the following figure :
-
- (1) 33 (2) 30
 (3) 66 (4) None of these
30. Which of the following sets is not a subset of:
 $A = \{7, 11\}$
 (1) $\{7\}$ (2) $\{\}$
 (3) $\{7, 11\}$ (4) None of these
31. How many integers lie between -219 and $+2190$?
 (1) 2409 (2) 2408
 (3) 2407 (4) None of these
32. $(+8) + \{(-6) + (-3)\} = \{(+8) + \square\} + (-3)$
 (1) -12 (2) 6
 (3) -6 (4) None of these

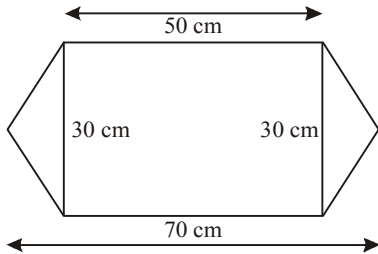
33. Find the HCF of the following numbers by prime factorisation method.
 88 and 99
 (1) 22 (2) 11
 (3) 7 (4) None of these
34. Evaluate $1\frac{7}{8} + 2\frac{1}{2} - 2\frac{11}{12}$
 (1) $1\frac{11}{24}$ (2) $2\frac{11}{24}$
 (3) $1\frac{11}{23}$ (4) None of these
35. $\frac{7}{11}$ of all the money in Mr Ghosh's bank account is Rs 98,000. How much money does Mr Ghosh have in his bank account?
 (1) 15400 (2) 1,54,000
 (3) 54,000 (4) None of these
36. 24% of a 4 kg 350 g block of ice melted away. What is the weight of ice now?
 (1) 33.06 kg (2) 3.000 kg
 (3) 3.306 kg (4) None of these
37. Out of 8400 candidates who sat for an entrance examination, only 294 passed. What was the percentage of failures in that examination?
 (1) 96.5% (2) 95%
 (3) 90% (4) None of these
38. What is the ratio of the perimeters of two squares with lengths measuring 8 cm and 8.5 cm?
 (1) 8 : 9 (2) 15 : 16
 (3) 16 : 17 (4) None of these
39. The given figure shows an isosceles triangle ΔPQR with $PQ = PR = 13$ cm and $PS = 12$ cm
-
- Which of the following relation is incorrect?
 (1) $PQ + QR + RP = 38$ cm
 (2) $\angle QPS = \frac{1}{2}\angle QPR$
 (3) $PQ - QR = 3$ cm
 (4) None of these
40. Multiplicative inverse of $\frac{0}{1}$ is
 (1) 0 (2) 1
 (3) Not determinable (4) None of these

41. Find the area of the following figure.



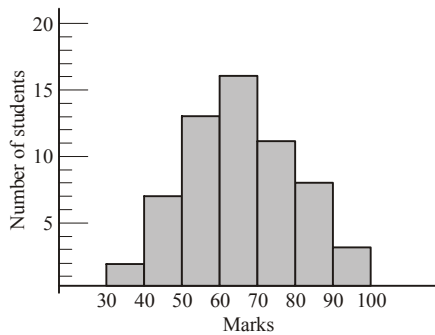
- (1) 76 m^2 (2) 60 m^2
 (3) 86 m^2 (4) None of these

42. Calculate the area of the following figure.



- (1) 900 cm^2 (2) 1800 cm^2
 (3) 21000 cm^2 (4) None of these

See the histogram and answer following questions no. 43 to 46



43. What is the total number of students who appeared for the examination?

- (1) 60 (2) 55
 (3) 50 (4) None of these

44. If the minimum pass marks are 40, how many of them failed?

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

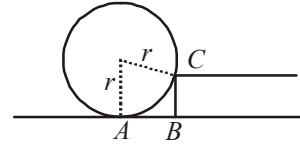
45. How many students got first division, if the minimum marks required for getting first division are 60?

- (1) 28 (2) 48
 (3) 38 (4) None of these

46. How many students were awarded merit, if the minimum marks required for it are 80?

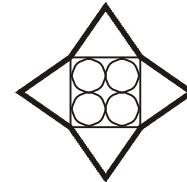
- (1) 12 (2) 10
 (3) 11 (4) None of these

47. A hoop is resting vertically at stair case as shown in the diagram. $AB = 12 \text{ cm}$ and $BC = 8 \text{ cm}$. The radius of the hoop is



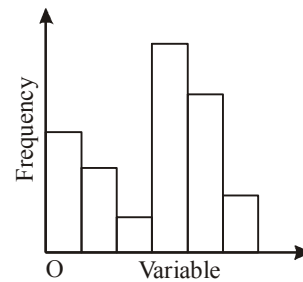
- (1) 13 cm (2) $13\sqrt{2} \text{ cm}$
 (3) 14 cm (4) None of these

48. Bases of four equilateral triangles form a square. Inside the square, four circles of radius 5 units are drawn as in the figure. The perimeter of the four cornered star is



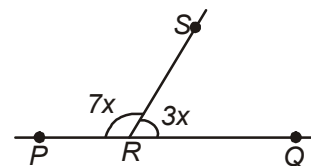
- (1) 100 (2) 120
 (3) 160 (4) None of these

49. The graph which is shown is a



- (1) Bar graph (2) Pie chart
 (3) Histogram (4) None of these

50. Find the value of x



- (1) 18° (2) 20°
 (3) 45° (4) None of these



END OF THE EXAM

