

SOF INTERNATIONAL MATHEMATICS OLYMPIAD

GUIDELINES FOR THE CANDIDATE

Total Questions : 35 | Time: 1 hr.

- 1. Please check your Name, Class and Section on the OMR sheet provided to you. In case, OMR sheet with your name is missing, please fill in information about yourself in the blank OMR sheet provided before start of exam.
2. Please fill in your Mobile Number clearly on the OMR Sheet and do not forget to sign it. We will share your marks / result and other information related to SOF exams on your mobile number.
3. The Question Paper comprises four sections:

Logical Reasoning (10 Questions), Mathematical Reasoning (10 Questions), Everyday Mathematics (10 Questions) and Achievers Section (5 Questions)

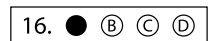
Each question in Achievers Section carries 2 marks, whereas all other questions carry one mark each.

- 4. All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
5. There is only ONE correct answer. Choose only ONE option for an answer.
6. To mark your choice of answers by darkening the circles on the OMR Sheet, use HB Pencil or Blue / Black ball point pen only. E.g.

Q.16: Sonia had 80 sweets. She gave 15 sweets to Danish and 15 sweets to Megha. How many sweets are left with her?

- A. 50 B. 30 C. 60 D. 40

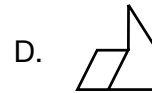
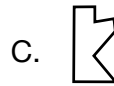
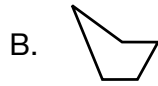
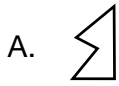
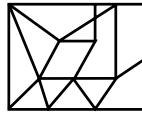
As the correct answer is option A, you must darken the circle corresponding to option A on the OMR Sheet.



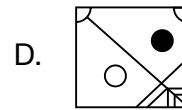
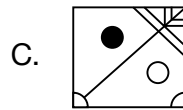
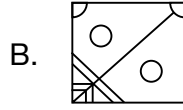
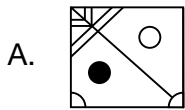
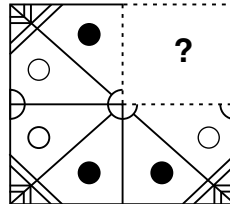
- 7. Rough work should be done in the blank space provided in the booklet.
8. Return the OMR Sheet to the invigilator at the end of the exam.
9. Please fill in your personal details in the space provided on this page before attempting the paper.

Name:.....
Section:..... SOF Olympiad Roll No.:..... Contact No.:.....

6. Which of the following options is exactly embedded in the given figure as one of its parts?



7. Which of the following options will complete the given figure pattern?



8. Select the combination of numbers so that letters are arranged accordingly to form a meaningful English word.

E O N S D C
1 2 3 4 5 6

A. 3, 2, 5, 4, 1, 6

B. 3, 2, 5, 4, 6, 1

C. 4, 5, 3, 6, 2, 1

D. 4, 1, 6, 2, 3, 5

9. Find the missing number, if a certain rule is followed either row-wise or column-wise.

48	91	?
6	13	12
8	7	15

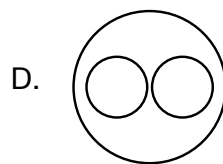
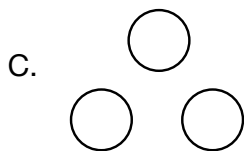
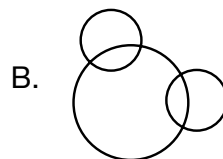
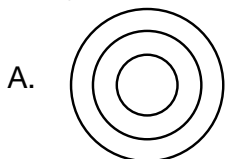
A. 160

B. 140

C. 180

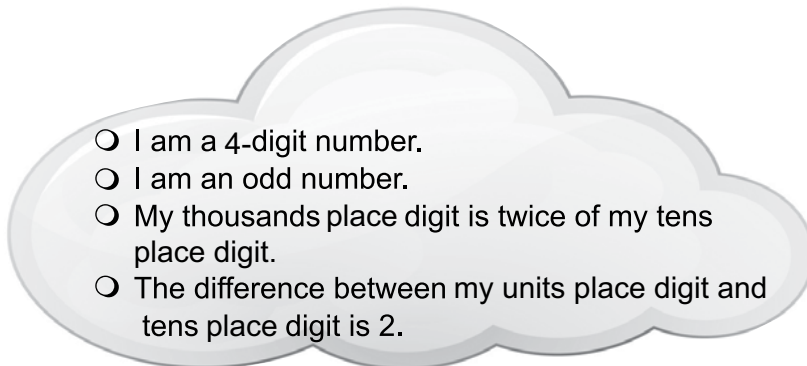
D. 190

10. Which one of the following Venn diagrams best represents the relationship amongst, "Dogs, Cats and Rats" ?



MATHEMATICAL REASONING

11. Identify the number from the clues given below.



- A. 8497 B. 6835 C. 4867 D. 8369
-

12. In 73569, the difference between the place values of the digit at ten thousands place and the digit at hundreds place is _____.

- A. 2500 B. 67000 C. 70500 D. 69500
-

13. Which of the following is CORRECT?

- A. $\frac{1}{8} < \frac{1}{13}$ B. $\frac{4}{23} > \frac{7}{23}$ C. $\frac{7}{9} > \frac{7}{9}$ D. $\frac{1}{100} < \frac{1}{2}$
-

14. The Hindu-Arabic numeral for the number DX is ____.

- A. 110 B. 210 C. 510 D. 410
-

15. Find the missing number.

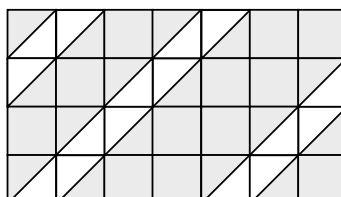
- A. 2
B. 3
C. 4
D. 5

$$\begin{array}{r}
 584 \\
 \times \square 8 \\
 \hline
 4672 \\
 + 17520 \\
 \hline
 22192
 \end{array}$$

16. $896 \times 4 = 3$ thousands 5 hundreds _____ tens and 4 ones.

- A. 5 B. 8 C. 50 D. 80
-

17. What fraction of the given figure is shaded?



A. $\frac{4}{7}$

B. $\frac{5}{7}$

C. $\frac{3}{7}$

D. $\frac{6}{7}$

18. The expanded form of 42796 is _____.

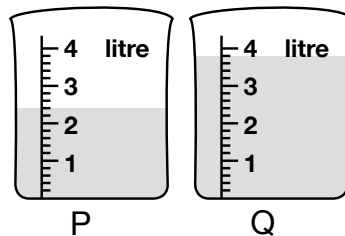
A. $40000 + 2000 + 70 + 96$

B. $40000 + 2000 + 700 + 96$

C. $40000 + 2000 + 700 + 90 + 6$

D. $42000 + 700 + 90 + 6$

19. Two beakers each containing some amount of water are shown. How many glasses of capacity 155 mL each can be filled completely from the total quantity of water shown?



A. 46

B. 20

C. 45

D. 40

20. Arrange the following numbers in descending order.

18805, 15885, 18058, 18588, 18855

A. 18805, 15885, 18058, 18855, 18588

B. 18588, 18855, 18805, 18058, 15885

C. 18805, 18855, 18588, 15885, 18058

D. 18855, 18805, 18588, 18058, 15885

EVERYDAY MATHEMATICS

21. A milk man supplies 50 L of milk everyday. On a particular day, the supply was 31 L 250 mL. The quantity of milk supplied on a particular day was _____ less than everyday supply.

A. 18 L 750 mL

B. 81 L 750 mL

C. 18 L 740 mL

D. 80 L 740 mL

22. A doll costs ₹ 428 more than a teddy bear. If the cost of the teddy bear is ₹ 1290, then how much does the doll cost?

A. ₹ 1718

B. ₹ 1780

C. ₹ 1700

D. ₹ 1500

23. Sneha had 21 drawing books. She got two more from her aunt, 12 more on her birthday and bought 3 more with her pocket money. How many drawing books does she have now?

A. 38

B. 40

C. 36

D. 28

24. Dinesh has 5 boxes of sweets. Each box contains 182 sweets. He packs them equally into some bags. Each bag contains 7 sweets. How many bags does he use?

A. 130

B. 152

C. 147

D. 124

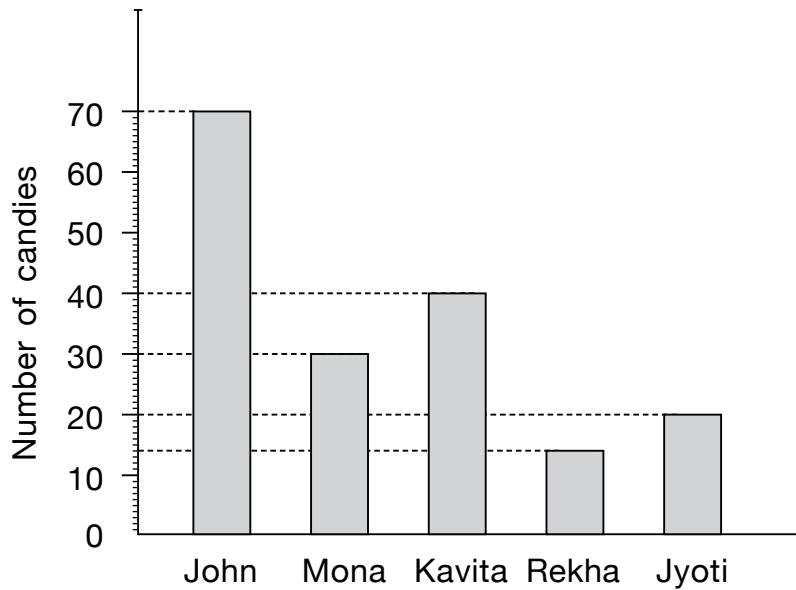
32. If $X + Y + Z = \frac{3}{4}$, $X + Y = \frac{1}{3}$ and $Z - X = \frac{1}{4}$, then what is the value of X ?

- A. $\frac{1}{12}$ B. $\frac{1}{6}$ C. $\frac{2}{13}$ D. $\frac{1}{8}$

33. Sanjay is thinking of a 5-digit even number PQRST. P is 3 more than the smallest odd number. Q is a common factor of 2 and 11. R is the product of the first 2 digits of the number. The sum of S and T is 9. T is a multiple of 3. What is the number Sanjay is thinking of?

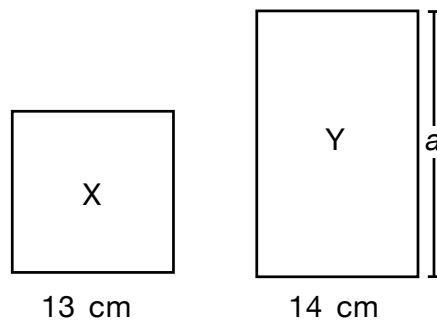
- A. 41436 B. 41463 C. 61636 D. 61663

34. How many candies must Kavita give to Rekha so that they will have the same number of candies?



- A. 13 B. 25 C. 51 D. 104

35. The total perimeter of Square X and Rectangle Y is 120 cm. Find the value of a.



- A. 17 cm B. 25 cm C. 15 cm D. 20 cm