



**SOF INTERNATIONAL  
MATHEMATICS OLYMPIAD  
2023-24**



**CLASS  
4**

**QUESTION  
PAPER SET  
A**

**DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO**

Total Questions: 35 | Time: 1 hr.

**Guidelines for the Candidate**

- You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
- Write your **Name, School Code, Class, Section, Roll No.** and **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.
- 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.
- All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
- There is only ONE correct answer. Choose only ONE option for an answer.
- 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.
- Rough work should be done in the blank space provided in the booklet.
- Return the OMR Sheet to the invigilator at the end of the exam.
- Please fill in your personal details in the space provided before attempting the paper.

16. ● (B) (C) (D)

Name:.....

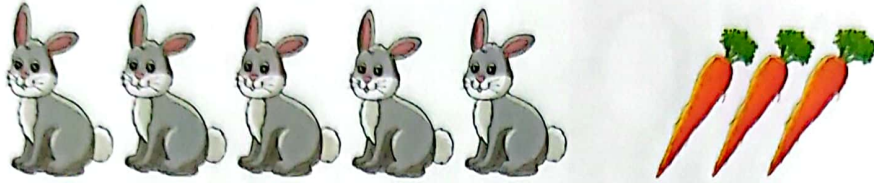
SOF Olympiad Roll No.:..... Contact No.:.....



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## LOGICAL REASONING

1. How many different possible combinations of 1 rabbit and 1 carrot each can be formed from the given rabbits and carrots?



- A. 12                      B. 15                      C. 10                      D. 8

2. Which of the following letters do not have any line of symmetry?



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

- A. 20  
B. 18  
C. 15  
D. 21

5	33	6
7	31	4
6	?	3

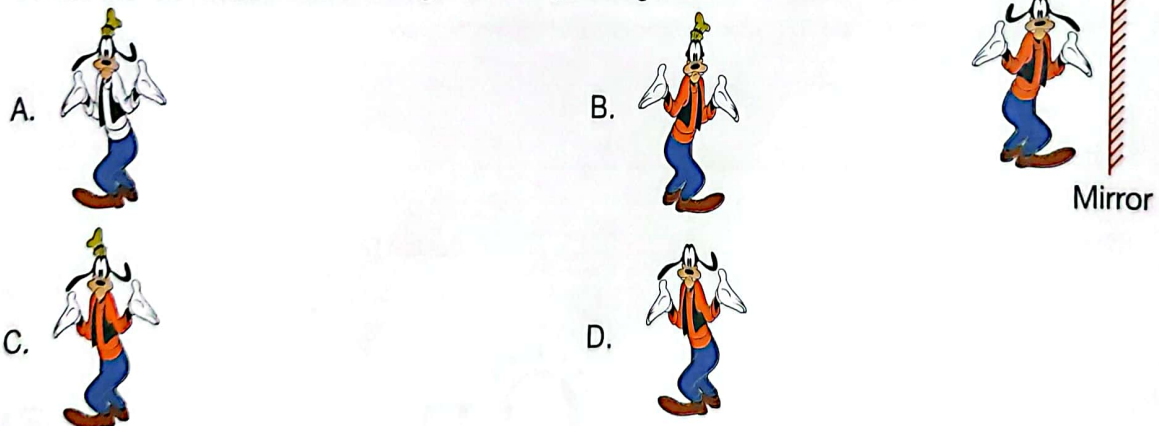
4. The codes for some letters are given below.

<b>Letters</b>	A	Z	K	B	I	S	R	N	J
<b>Codes</b>	@	•	?	!	\$	#	©	+	x

Find the code for BRAIN.

- A. !©@\$+                      B. x•!©©                      C. ©!\$+@                      D. !©@\$?

5. Select the CORRECT mirror image of the given figure.



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SPACE FOR ROUGH WORK



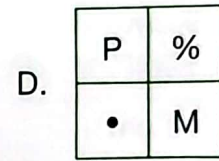
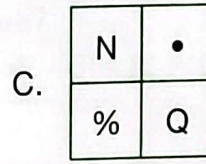
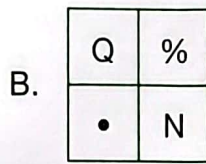
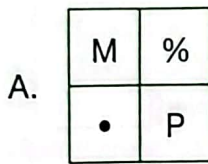
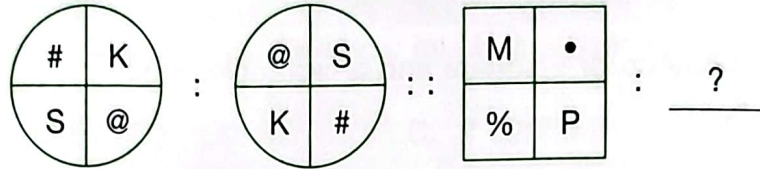
6. Select the combination of numbers from the options in which the given letters are arranged accordingly to form a meaningful English word.

T C B K U E  
1 2 3 4 5 6

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

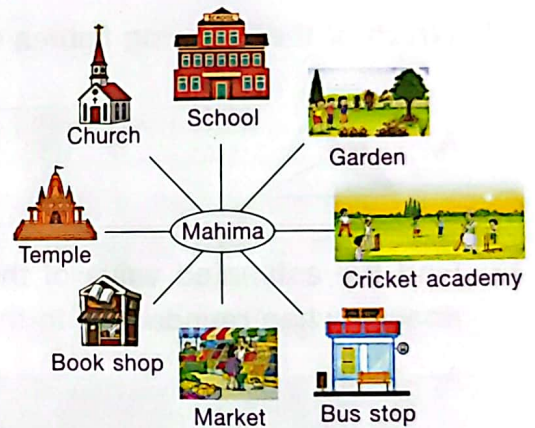
- B. 3, 5, 2, 4, 6, 1  
D. 3, 2, 4, 5, 6, 1

7. There is a certain relationship between the pair of figures on the either side of ::. Identify the relationship of the given pair and find the missing figure.



8. Mahima is facing the Book shop. If she takes  $\frac{3}{8}$  turn clockwise and then  $\frac{1}{2}$  turn anti-clockwise, then she will be facing \_\_\_\_\_.

- A. Temple  
B. School  
C. Market  
D. Bus stop



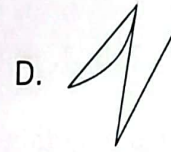
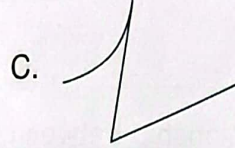
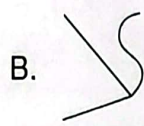
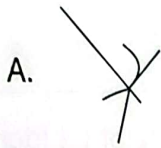
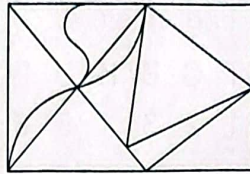
9. If star R and star T are removed from the given arrangement, then star \_\_\_\_\_ is third to the right of third star from the left end.



- A. P                      B. W                      C. S                      D. K

SPACE FOR ROUGH WORK

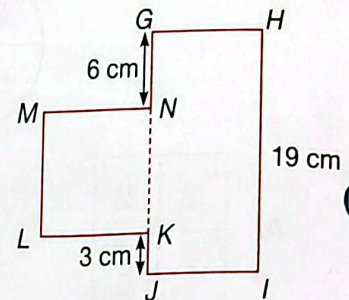
10. Which of the following figures is exactly embedded in the given figure as one of its parts?



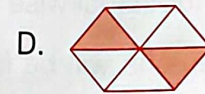
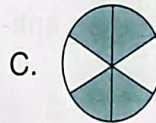
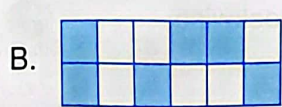
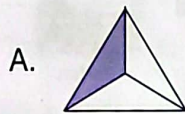
### MATHEMATICAL REASONING

11. Given figure is made up of a square and a rectangle. Find the length of  $LK$ .

- A. 8 cm
- B. 9 cm
- C. 7 cm
- D. 10 cm

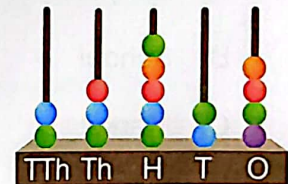


12. Which of the following figures shows  $\frac{1}{2}$  as shaded fraction?



13. Find the estimated value of the number shown on the abacus when rounded off to the nearest hundreds.

- A. 24000
- B. 23500
- C. 23520
- D. 23600



14. If  $X$  is the seventh multiple of 8 and  $Y$  is the smallest factor of 150, then find the value of  $X - Y$ .

- A. 151
- B. 60
- C. 149
- D. 55

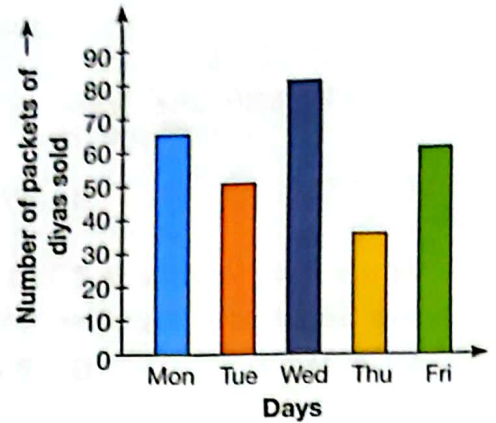
15. Mini took 14 mins 8 secs to walk from her home to school. On her way back home, she took another route and reached home in 12 mins 44 secs. How much time did she save by taking the shorter route?

- A. 1 min 2 secs
- B. 82 secs
- C. 1 min 24 secs
- D. Both B and C

SPACE FOR ROUGH WORK



**Direction (16-17) :** The given bar graph shows the number of packets of diyas sold during the given five days of a week. Study the graph carefully and answer the following questions.



16. What fraction of total number of packets of diyas were sold on Wednesday?

- A.  $\frac{7}{29}$                       B.  $\frac{3}{4}$   
 C.  $\frac{8}{29}$                       D. None of these

17. If each packet of diyas costs ₹ 250, then how much total money was earned on Tuesday and Friday together?

- A. ₹ 25000                      B. ₹ 27500                      C. ₹ 22000                      D. ₹ 23500

18. Which of the following gives the greatest value?

- A. CMLX + XCIX                      B. DCCV – CXV                      C. CDLIV + CCC                      D. MCMXC – DCX

19. Compare and fill the box.

$$\frac{5}{18} + \frac{3}{6} - \frac{2}{9} \quad \boxed{\phantom{000}} \quad \frac{7}{6} + \frac{3}{18} - \frac{1}{9}$$

- A. =    B. <  
 C. >    D. Can't be determined

20. A big milk container contains 18 L 450 mL of milk. The milk is then poured into 3 small containers of capacity 4L 200 mL each. How much quantity of milk is left in the big container?

- A. 7 L 250 mL                      B. 5 L 850 mL                      C. 6 L 150 mL                      D. None of these

### EVERYDAY MATHEMATICS

21. Kartik bought 515 sacks of sugar. If each sack contains 43 kg of sugar, then how much total sugar did he buy?

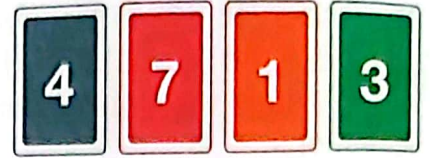
- A. 21500 kg                      B. 22145 kg                      C. 19250 kg                      D. 18545 kg

22. Purvi travelled 45 km 750 m on Friday, 52 km 435 m on Saturday and 67 km 864 m on Sunday from her home and reached her grandparents' home. How far is Purvi's grandparents' home from her home?

- A. 166 km 49 m                      B. 166 km 409 m                      C. 166 km 490 m                      D. 165 km 409 m

SPACE FOR ROUGH WORK

23. In one round of a number game, Ashima got the given number cards. Which of the following greatest 5-digit number can she form by using each digit at least once?



- A. 77314                      B. 77777                      C. 77431                      D. 74431

24. Virat's daily income is ₹ 750. How much total money will he earn in the month of August and September together, if he works every day?

- A. ₹ 45000                      B. ₹ 45750                      C. ₹ 42000                      D. ₹ 46500

25. In a marathon, 2562 people participated. Out of these,  $\frac{2}{3}$  of the total people were 60 years or above. How many people below 60 years participated in the marathon?

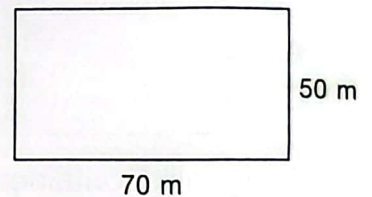
- A. 854                      B. 816                      C. 1708                      D. 982

26. Atul bought 15 packets of milk which cost ₹ 645. How much will 24 such packets of milk cost?

- A. ₹ 945                      B. ₹ 1032                      C. ₹ 1120                      D. ₹ 1302

27. Kirti walks around the given rectangular field two times. Find the total distance covered by her.

- A. 280 m                      B. 480 m  
C. 240 m                      D. 320 m



28. A bicycle company manufactures 48520 bicycles in a month. Out of these, 8719 bicycles were defective. How many manufactured bicycles were not defective?

- A. 39719                      B. 41615                      C. 37519                      D. 39801

29. Kavya bought the given washing machine, the tag on the machine is the price of machine after rounding it off to the nearest hundreds. Which of the following could be the price of the washing machine?

- A. ₹ 58652                      B. ₹ 58485  
C. ₹ 58595                      D. ₹ 59584



30. There are 60 passengers in a bus, out of which, 25 are males, 20 are females and rest are children. What fraction of total passengers in the bus are children?

- A.  $\frac{3}{4}$                       B.  $\frac{2}{3}$                       C.  $\frac{1}{3}$                       D.  $\frac{1}{4}$

SPACE FOR ROUGH WORK



## ACHIEVERS SECTION

31. If the digits at hundreds place and units place in each of the following numbers are interchanged, then find the Roman numeral for the new numbers formed.

(p) 3518

(q) 2917

- | (p)          | (q)      |
|--------------|----------|
| A. MMMDCCCXV | MMDCCXIX |
| B. MMMDXVIII | MMCMVII  |
| C. MMMDCCXIV | MCMLXIX  |
| D. MMDCCCXV  | MCMXLIV  |

32. Read the given statements carefully and state T for true and F for false.

- (i) The largest factor of a number is always 1.  
 (ii) There are 6 common multiples of 5 and 15 that lie between 1 and 100.  
 (iii) The HCF of 40 and 200 is 20.

- |    | (i) | (ii) | (iii) |
|----|-----|------|-------|
| A. | T   | T    | F     |
| B. | T   | F    | T     |
| C. | F   | F    | T     |
| D. | F   | T    | F     |

33. The given table shows the points scored by Raghav and Puneet in three rounds of a quiz competition.

Rounds	First	Second	Third
Raghav	50	?	90
Puneet	70	80	60

If Raghav scored 40 points less than Puneet in the second round, then

- (a) What fraction of the total points is scored by Raghav in second round?  
 (b) Who won the quiz and by how many points?

- |    | (a)           | (b)               |
|----|---------------|-------------------|
| A. | $\frac{3}{5}$ | Puneet, 50 points |
| B. | $\frac{2}{5}$ | Raghav, 30 points |
| C. | $\frac{2}{9}$ | Puneet, 30 points |
| D. | $\frac{1}{9}$ | Raghav, 50 points |

SPACE FOR ROUGH WORK

34. The given pictograph shows the number of tickets sold for five movies on Sunday. Study the graph carefully and answer the following questions.

(p) If each ticket costs ₹ 250, then how much more money was earned on selling tickets for movie T than movie U?

(q) Find the fraction of the number of tickets sold for movie S to the number of tickets sold for movie W.

- (p)
- A. ₹ 150000
- B. ₹ 125000
- C. ₹ 150000
- D. ₹ 135000

- (q)
- $\frac{4}{7}$
- $\frac{2}{3}$
- $\frac{2}{3}$
- $\frac{3}{5}$

Movies	Number of tickets sold
P	
S	
T	
W	
U	

Each represents 150 tickets.

35. Study the given pictures carefully and arrange them in ascending order according to their weights.

A. , ,

B. , ,

C. , ,

D. , ,

SPACE FOR ROUGH WORK

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