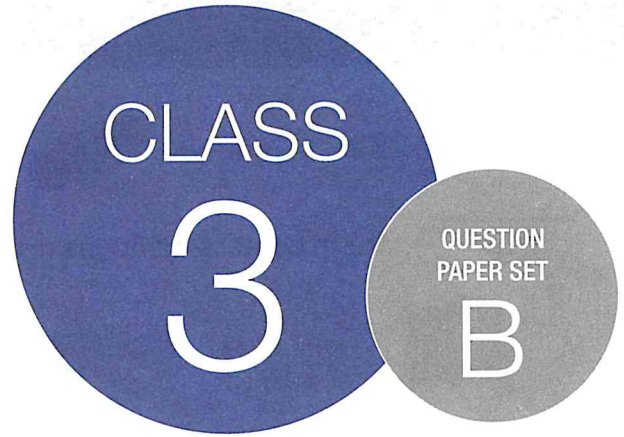


**SOF INTERNATIONAL
MATHEMATICS OLYMPIAD
2019-20**



DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Total Questions: 35 | Time: 1 hr.

Name:.....

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

Guidelines for the Candidate

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.

16. A B C D

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.

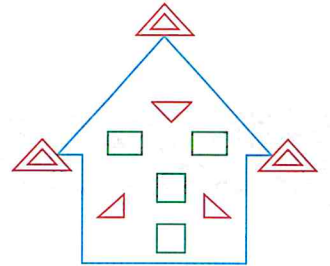
LOGICAL REASONING

1. If  is called ,  is called ,  is called , then what is used as road transport?

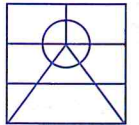
- A.  B.  C.  D. 

2. Which of the following shapes is missing in the given figure?

- A. Triangle
B. Rectangle
C. Circle
D. Square



3. Select a figure from the options which is exactly embedded in the given figure as one of its parts.



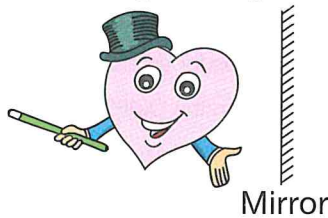
- A.  B.  C.  D. 

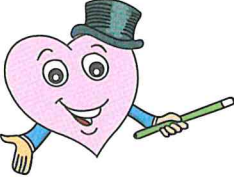
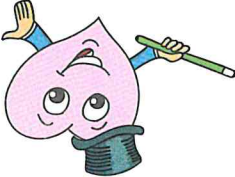
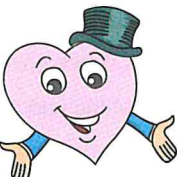
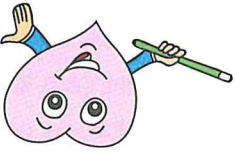
4. Find the word that CANNOT be formed from the letters of the given word.

CHRISTMAS

- A. CHAIRS B. RACIST C. SHIRTS D. CAROMS

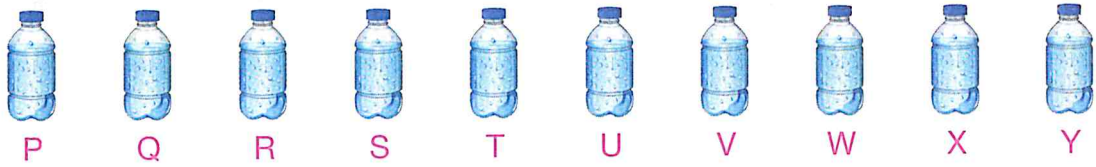
5. Select the correct mirror image of the given figure.



- A.  B.  C.  D. 

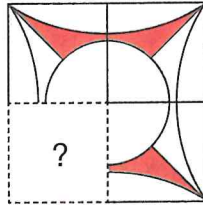
SPACE FOR ROUGH WORK

6. If water bottles S and V are removed from the given arrangement, then which of the following water bottles is fourth to the right of the sixth water bottle from the right end?



- A. R B. T C. X D. U

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



- A.  B.  C.  D. 

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



- A.  B.  C.  D. 

9. How many possible combinations of 1 pen and 1 pen holder can be formed from the given pens and pen holders?

- A. 15
B. 12
C. 8
D. 7



10. Select the odd one out.

- A.  B.  C.  D. 

SPACE FOR ROUGH WORK

MATHEMATICAL REASONING

11. In which of the following options, fractions are arranged in ascending order?

A. $\frac{2}{7}, \frac{9}{7}, \frac{5}{7}, \frac{3}{7}$

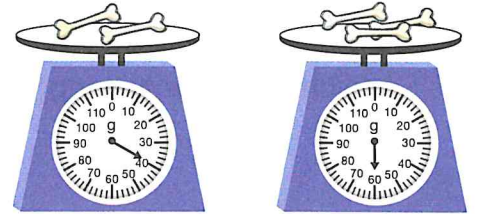
B. $\frac{2}{7}, \frac{9}{7}, \frac{3}{7}, \frac{5}{7}$

C. $\frac{2}{7}, \frac{3}{7}, \frac{5}{7}, \frac{9}{7}$

D. $\frac{9}{7}, \frac{5}{7}, \frac{3}{7}, \frac{2}{7}$

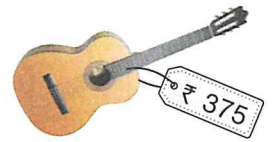
12. Find the weight of one bone, if the weight of each bone is equal.

- A. 25 g
- B. 15 g
- C. 10 g
- D. 20 g

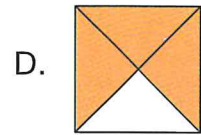
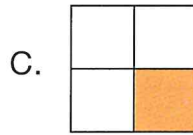
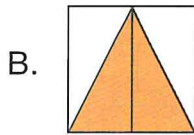
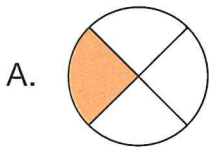


13. Dishank has one ₹ 500 note and one ₹ 50 note. How much more money does he need to buy 2 guitars?

- A. ₹ 150
- B. ₹ 250
- C. ₹ 175
- D. ₹ 200



14. Which of the following figures shows $\frac{2}{4}$ shaded part?



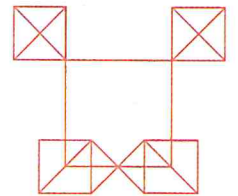
15. Find the missing digit in the box, if remainder is equal to 2.

- A. 6
- B. 2
- C. 3
- D. 4

$$\begin{array}{r} \square \\ 14 \overline{) 49} \\ \underline{14} \\ 29 \\ \underline{28} \\ 10 \\ \underline{8} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

16. How many minimum straight lines are required to draw the given figure?

- A. 26
- B. 20
- C. 24
- D. 32



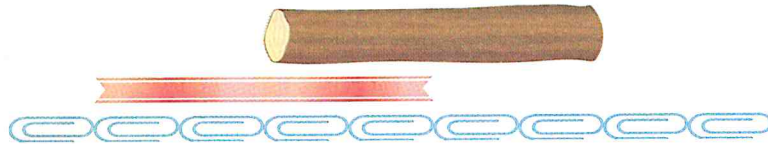
17. Which of the following signs will replace the (?) in the box?

$$56 \times 2 = 106 \boxed{?} 6$$

- A. +
- B. -
- C. ×
- D. ÷

SPACE FOR ROUGH WORK

18. The sum of the lengths of the wooden log and ribbon is _____ .



- A. 12 B. 8 C. 16 D. 4

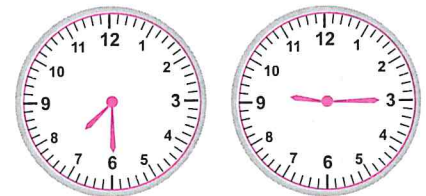
19. The number name of the smallest four digit even number that can be formed by using all the given digits (if repetition of digits is not allowed) is _____.

- A. Four thousand six hundred and ninety eight
B. Four thousand eight hundred and ninety six
C. Four thousand nine hundred and eighty six
D. Four thousand six hundred and eighty nine



20. The given clocks show the time in the evening at which Rohan starts and finishes his home work.
How long does he take to complete his home work?

- A. 1 hr 25 minutes
B. 1 hr 30 minutes
C. 1 hr 45 minutes
D. 2 hrs







Starts
homework

Finishes
homework

EVERYDAY MATHEMATICS

21. Manoj sells 26 packets of 6 mangoes each and is left with 430 mangoes. How many mangoes did Manoj have at first?

- A. 586 B. 155 C. 117 D. 585

22. Weight of  is 21 kg more than the weight of . If  weighs 79 kg, then what is the weight of  ?

- A. 100 kg B. 189 kg C. 58 kg D. 179 kg

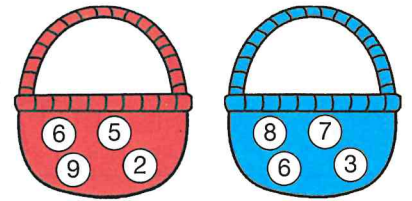
23. Priyanka buys 21 cupcakes for her friends every day. How many cupcakes does she buy in the month of December?

- A. 652 B. 741 C. 651 D. 630

SPACE FOR ROUGH WORK

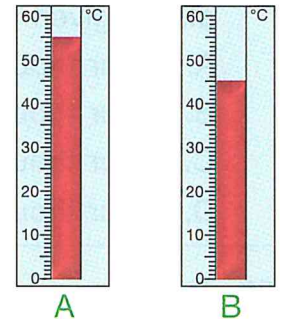
24. Sohan has two baskets full of some number tokens. He likes the numbers that are in red basket. Which of the following numbers formed by using given basket numbers will he like the most?

- A. 8763
- B. 6529
- C. 7563
- D. 6958



25. If the room temperature is 7°C less than the difference between the temperatures shown on thermometers A and B, then what is the room temperature?

- A. 3°C
- B. 10°C
- C. 14°C
- D. 21°C



26. There were 1010 pastries in a shop. Of these, 175 were butterscotch pastries, 240 were chocolate and the rest were pineapple. What fraction of pastries were pineapple in the shop?

- A. $\frac{275}{1010}$
- B. $\frac{415}{1010}$
- C. $\frac{119}{1010}$
- D. $\frac{595}{1010}$

27. Varnika planted some plants in the garden in some rows. If number of plants in the row is same as the number of rows, then which of the following options can represent the total number of plants?

- A. 9×9
- B. 13×5
- C. 53×1
- D. 3×4

28. 46 students from Class-3 contributed ₹ 2530 for Diwali Party. How much money did one student contribute, if each student contributed equal amount?

- A. ₹ 35
- B. ₹ 40
- C. ₹ 55
- D. ₹ 50

29. A shopkeeper made 5 L 345 mL of tomato ketchup on Sunday and 4 L 645 mL on Monday. How much tomato ketchup did he make in two days?

- A. 9 L 900 mL
- B. 8 L 940 mL
- C. 8 L 950 mL
- D. 9 L 990 mL

30. Arman bought three items shown here. What was the total cost of these three items?

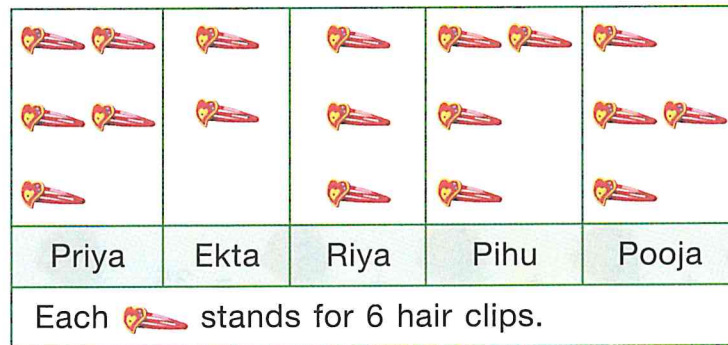
- A. ₹ 40
- B. ₹ 35
- C. ₹ 30
- D. ₹ 55



SPACE FOR ROUGH WORK

ACHIEVERS SECTION

31. The given pictograph shows the number of hair clips 5 friends have. Study the pictograph carefully and answer the following question.

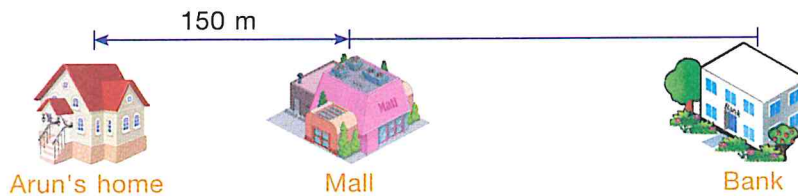


What is the difference between the number of hair clips Priya and Pihu have?

- A. 5 B. 10 C. 6 D. 15

32. Distance between the bank and the mall is twice the distance between Arun's home and mall. Find the distance travelled by Arun

- (a) From his home to bank and back home
 (b) From mall to bank and back to his home.



- | | |
|------------|------------|
| (a) | (b) |
| A. 900 m | 650 m |
| B. 600 m | 750 m |
| C. 750 m | 700 m |
| D. 900 m | 750 m |

33. Identify the four digit number.



- Its ones digit is the smallest one digit odd number.
- Its hundreds digit is $96 \div 12$.
- Its tens digit is 4 times its ones digit.
- Its thousands digit is two more than its tens digit.







- A. 6841 B. 6542 C. 8641 D. 9482

SPACE FOR ROUGH WORK

34. Shanaya bought 2 kg Potatoes, 1 kg Radish and $\frac{1}{2}$ kg Apple. How much amount did she get back, if she gave ₹ 500 to the shopkeeper?


- A. ₹ 220
 B. ₹ 280
 C. ₹ 380
 D. ₹ 290

Items	Price per kg
Apple	₹ 90
Potato	₹ 55
Cherry	₹ 110
Radish	₹ 65
Cauliflower	₹ 80


35. If  = 35,  ×  = 21 and  +  = 11, then  = ?

A. 9 B. 8 C. 7 D. 6


SPACE FOR ROUGH WORK




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