# CLASS 3

QUESTION PAPER SET A

IMO

SOF INTERNATIONAL MATHEMATICS OLYMPIAD
2022-23

DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Total Questions: 35 | Time: 1 hr.

Guidelines for the Candidate

1. You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.

2. Write your **Name, School Code, Class, 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.

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. ● Ⓑ Ⓒ Ⓓ

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.
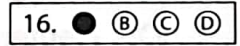
SOF
SCIENCE OLYMPIAD FOUNDATION
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1. There is a certain relationship between the pair of figures on the either side of ::. Identify the relationship between the left pair and find the missing figure.

$$T : 20 :: L : \underline{\quad ? \quad}$$

A. 10　　　B. 8　　　C. 7　　　D. 12

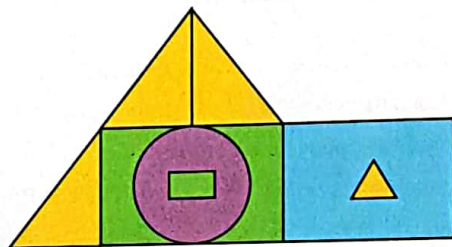2. Select the combination of numbers so that the letters are arranged accordingly to form a meaningful English word.

E	R	G	D	A
1	2	3	4	5

A. 4, 1, 2, 3, 5
B. 3, 1, 5, 2, 4
C. 3, 2, 5, 4, 1
D. 2, 1, 3, 4, 5

3. If 'Dog' means 'Lion', 'Lion' means 'Cow' and 'Cow' means 'Horse', then _____ gives us the milk.

A. Cow　　　B. Lion　　　C. Horse　　　D. Dog

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

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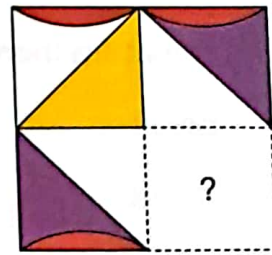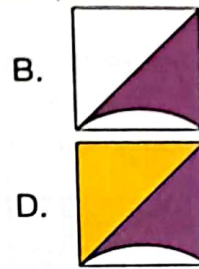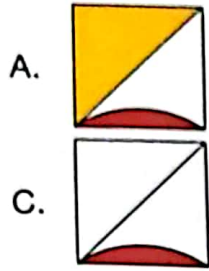B. Triangle
C. Rectangle
D. Square

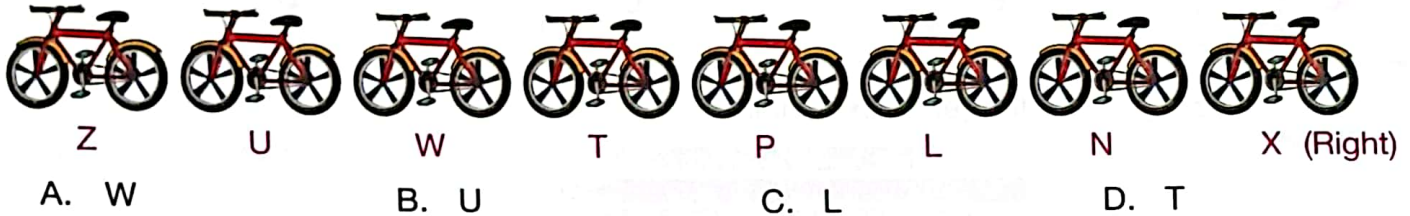5. How many possible combinations of 1 marker and 1 duster each can be formed from the given markers and dusters?
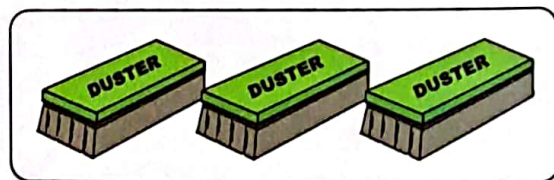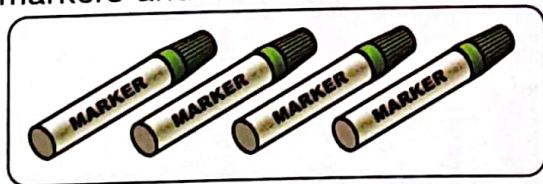
A. 12　　　B. 10　　　C. 15　　　D. 7

SPACE FOR ROUGH WORK

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

A.

B.

C.

D.

 ?

7. Bicycle _____ is fifth to the left of second bicycle from the right end.

Z   U   W   T   P   L   N   X (Right)

A. W   B. U   C. L   D. T

8. How many groups of 5 board pins each can be formed from the given board pins?

A. 5   B. 6   C. 3   D. 4
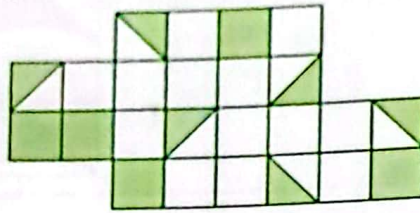
9. Select the CORRECT mirror image of the given figure.

WOW |

Mirror

A. WOW

B. MOW

C. WOM

D. MOM

10. Find the missing number in the given number pattern.

15   35   55   75   95   ?   135

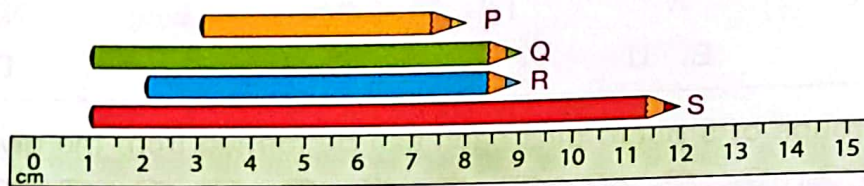A. 115   B. 120   C. 100   D. 112

SPACE FOR ROUGH WORK

11. What fraction of the given figure is unshaded?
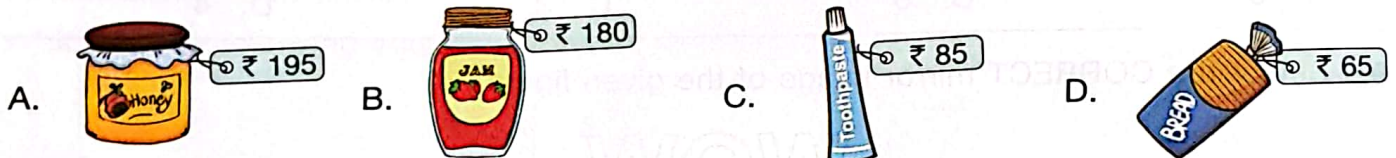
A. $\dfrac{7}{24}$ B. $\dfrac{8}{24}$ C. $\dfrac{16}{24}$ D. $\dfrac{17}{24}$
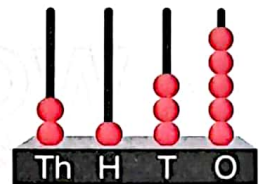
12. Pencil S is _____ longer than pencil P.

A. 4 cm B. 5 cm C. 6 cm D. 7 cm

13. Which of the following is the cheapest item?
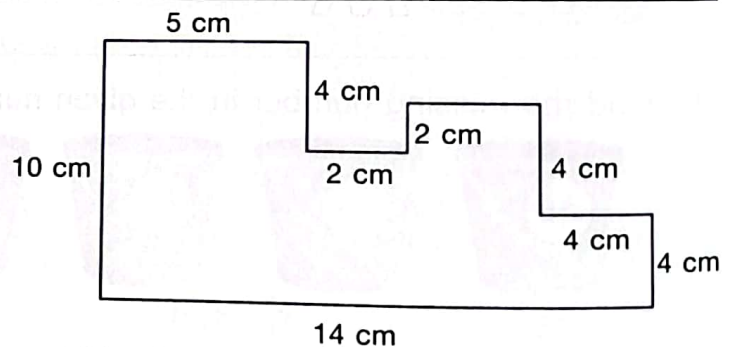
A. ₹ 195 B. ₹ 180 C. ₹ 85 D. ₹ 65

14. Which of the following options shows the number shown on the abacus?

A. Two thousand three hundred twenty five
B. Two thousand one hundred thirty five
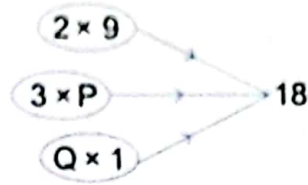C. Three thousand two hundred thirty five
D. None of these

Th H T O

15. Find the total length of boundary of the given figure (not drawn to scale).

A. 50 cm

B. 48 cm

C. 52 cm

D. 58 cm

5 cm
4 cm
2 cm
10 cm
2 cm
4 cm
4 cm
4 cm
14 cm

SPACE FOR ROUGH WORK

16. Study the given number bond carefully and find the value of P + Q.

A. 30   B. 18   C. 28   D. 24
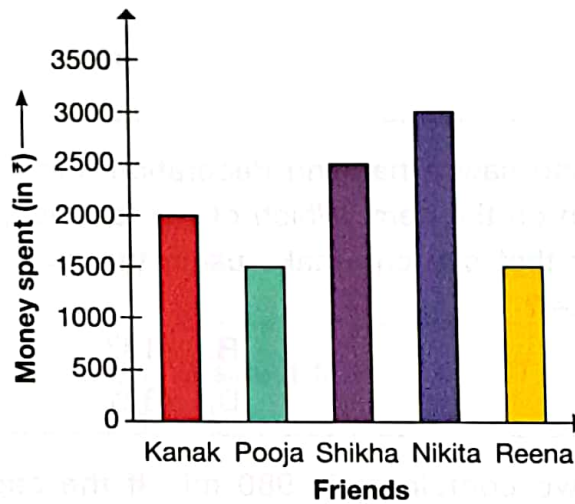
17. The given clock shows _____.
   A. Half past 9
   B. 10 minutes to 8
   C. Quarter past 9
   D. 20 minutes past 8

Direction (18-19) : The given bar graph shows the amount of money spent by five friends on shopping. Read the graph carefully and answer the following questions.

18. _____ spent maximum amount on shopping.
   A. Nikita   B. Pooja   C. Reena   D. Kanak

19. How much more amount is spent by Pooja and Reena together than Shikha?
   A. ₹ 300   B. ₹ 500   C. ₹ 750   D. ₹ 800

20. If the cost of is ₹ 36, then what is the cost of 6 such water bottles?

   A. ₹ 200   B. ₹ 206   C. ₹ 216   D. ₹ 186

SPACE FOR ROUGH WORK

21. Manha bought 125 hairbands. If she distributes all hair bands among 5 girls, then how many hair bands will each girl get?
    A. 20   B. 25   C. 30   D. 45

22. Kunal watched cricket match from 9:40 p.m. to 11:30 p.m. How long did he watch the match?
    A. 110 mins   B. 100 mins   C. 90 mins   D. 115 mins

23. Anuj, Gaurav and Sohan had some strawberries. Anuj ate 5 strawberries, Gaurav ate 3 strawberries, Sohan ate 4 strawberries and there were still 7 strawberries left in all. What fraction of the total strawberries were left?
    A. $\dfrac{5}{15}$ B. $\dfrac{12}{19}$ C. $\dfrac{7}{19}$ D. $\dfrac{3}{17}$

24. Vineeta makes a hut as shown. How many horizontal lines did she make?
    A. 2
    B. 3
    C. 5
    D. 6

25. Janvi went to market and saw a hanging decoration item. There were some digits written on the item. Which of the following is the greatest 4-digit number that she can make using the given digits (use each digit only once)?
    A. 3271   B. 2137
    C. 7312   D. 7321

26. The total capacity of two containers is 980 mL. If the capacity of one container is 520 mL, then find the capacity of other container.
    A. 530 mL   B. 480 mL   C. 460 mL   D. 510 mL

27. Riya wants to purchase the given bicycle. If she saves ₹ 10 every week, then for how many weeks must she save the money to buy the bicycle?
    A. 40   B. 70   C. 45   D. 50

28. A library has 4570 English books and 3195 Hindi books. How many less Hindi books are there in the library than English books?
    A. 1460   B. 2300   C. 1570   D. 1375

SPACE FOR ROUGH WORK

CamScanner

29. A trolley can hold 95 kg weight. Rahul puts 13 kg of rice, 18 kg of flour, 36 kg of sugar and 3 kg of fruits. How much more weight can the trolley hold?

A. 15 kg

B. 25 kg

C. 12 kg

D. 14 kg

30. Niharika made a triangular design each side having 15 cm. Find the total length of boundary of the design.

A. 45 cm

B. 30 cm

C. 50 cm

D. 25 cm

ACHIEVERS SECTION

31. Fill in the blanks and select the CORRECT option.
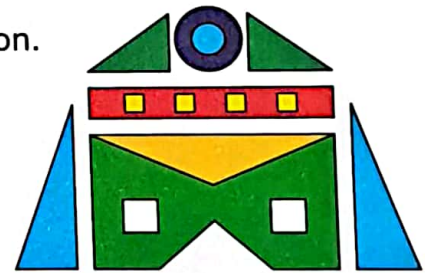
(i) Place value of the digit 5 in 78592 is __P__.

(ii) The smallest 3-digit number that can be formed from the digits 5, 0, 2 (using each digit only once) is __Q__.
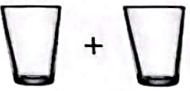
(iii) Sum of place values of all the digits in the number 3015 is __R__.

	P	Q	R
A.	5	205	9
B.	500	520	3015
C.	500	205	3015
D.	50	250	9

32. Study the given figure carefully and select the CORRECT option.

A. Number of slanting lines is 8.

B. Number of horizontal lines is 21.
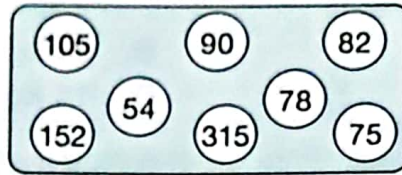
C. Number of curved lines is 2.

D. All of these

33. If [cup] + [cup] + [cup] + [cup] = 160; [cup] × [spoon] = 200 and [glass] + [glass] + [spoon] = 95, then find the value of [cup] + [glass] − [spoon].

A. 80

B. 85

C. 110

D. 130

SPACE FOR ROUGH WORK

34. Read the given statements carefully about the given collection of numbers and select the CORRECT option.

(105) (90) (82) (54) (78) (152) (315) (75)

P : The fraction of numbers having 5 at its units place to the all numbers is $\frac{2}{6}$.

Q : The fraction of even numbers to the all numbers is $\frac{5}{8}$.

A. Only P is true.
B. Only Q is true.
C. Both P and Q are true.
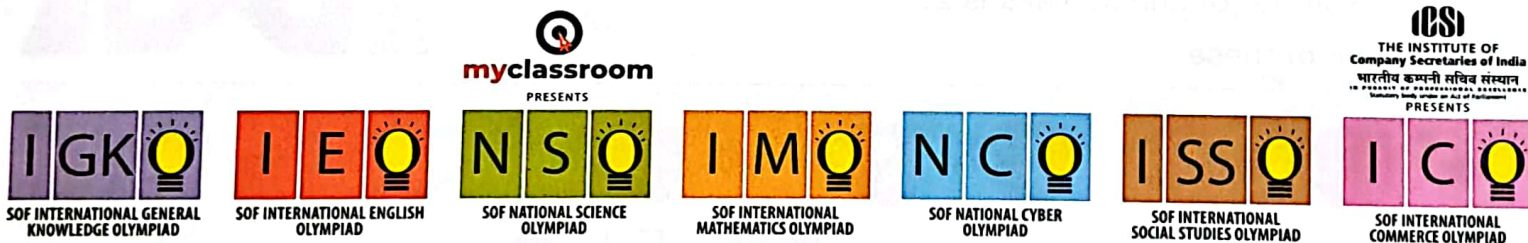D. Neither P nor Q is true.

35. Anchal has the given amount of money.

She bought the following items. How much amount will be left with her?

₹ 350   ₹ 540   ₹ 330

A. ₹ 1220   B. ₹ 1480   C. ₹ 1560   D. ₹ 980

SPACE FOR ROUGH WORK