IMO

CLASS 4

Contents

SCIENCE OLYMPIAD FOUNDATION

IMO

LEVEL - 2

1. What is the missing number?

   A. 2
   B. 4
   C. 5
   D. 8
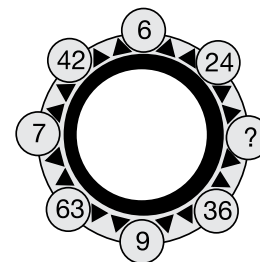
2. At a fair, every 6ᵗʰ person was given a pen and every 10ᵗʰ person was given a book. What was the position of the first person who received both a pen and a book?

   A. 20ᵗʰ   B. 30ᵗʰ   C. 60ᵗʰ   D. 15ᵗʰ

3. Some letters are given which are numbered 1, 2, 3, 4, 5 and 6. Find that combination of numbers so that letters arranged accordingly form a meaningful word.

$$E \quad Q \quad U \quad A \quad R \quad S$$
$$1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6$$
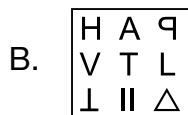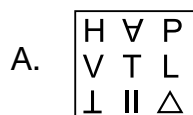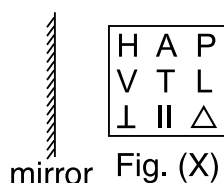
   A. 6, 2, 3, 4, 5, 1   B. 1, 2, 4, 5, 3, 6   C. 6, 3, 2, 4, 1, 5   D. 1, 6, 5, 4, 3, 2

4. Which one word CANNOT be made from the letters of the given word?
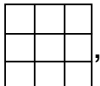
   INTELLIGENCE

   A. CANCEL   B. INCITE   C. GENTLE   D. NEGLECT

5. Select the correct mirror image of the fig. (X).

mirror   Fig. (X)

   A.   B.   C.   D.

6. If ⊞ means (grid), ⊞ means (grid) and ⊞ means ◇, then which figure is formed by exactly 10 straight lines?

   A. (figure)   B. (figure)   C. (figure)   D. (figure)

7. How many more sleeping lines than the vertical lines are there in the given letters?

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

   AL

8. Which of the following parts is NOT embedded in the figure (X)?

   A. (figure)   B. (figure)

   C. (figure)   D. (figure)
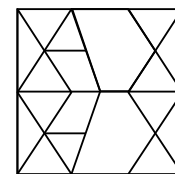
   Figure (X)

9. Study the adjoining diagram to answer the question given below.
   Grape tree is south-east of _____.
   A. Mango tree
   B. Peach tree
   C. Apple tree
   D. Banana tree

   Mango Tree
   Apple Tree   Grape Tree
   Banana Tree   Peach Tree
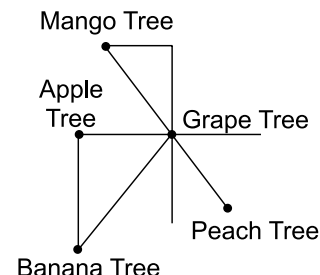
10. There is a certain relationship between the pair of figures on the either side of :·:. Identify the relationship and find the missing figure.

    F :·: N :·: ? :·: K

    A. M   B. E   C. R   D. V
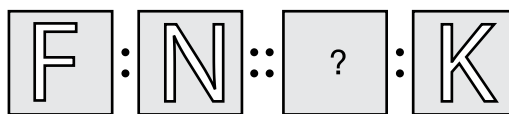
Space for Rough Work

11. Arrange the following from the smallest to the greatest.

CDXXII	DX	DXXV	DCII
P	**Q**	**R**	**S**

  A. P, Q, R, S   B. P, R, S, Q   C. P, R, Q, S   D. P, Q, S, R

12. Given below is the price list of three items. Latika wants to purchase the combination of 1 skirt, 1 top and 1 jacket. If she has only ₹ 3000, then which combination of skirt, top and jacket will she buy?

| Skirt	Price	Top	Price	Jacket	Price
S_1	₹ 2000	T_1	₹ 1000	J	₹ 500
S_2	₹ 1500	T_2	₹ 1800		

  A. $S_1 T_2 J$ B. $S_1 T_1 J$ C. $S_2 T_2 J$ D. $S_2 T_1 J$

13. Which of the following options is correct with respect to fraction of unshaded parts of the figures?

  A. $= \left[\dfrac{3}{8} - \dfrac{3}{16}\right]$ B. $= \left[\dfrac{1}{2} - \dfrac{1}{4}\right]$ C. $= \left[\dfrac{1}{6} + \dfrac{1}{3}\right]$ D. $= \left[\dfrac{3}{8} + \dfrac{3}{24}\right]$

14. Factors of sum of the common factors of 18, 24 and 36 is _____.

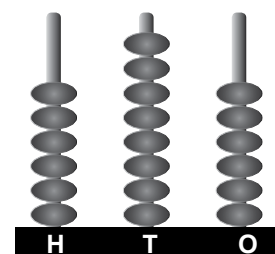 A. 1, 2, 3, 4, 6, 12   B. 2, 4, 6, 12   C. 1, 2, 4, 12   D. 1, 2, 4, 6, 12

15. How many beads should be removed from the tens place and hundreds place in the abacus shown here if it has to represent number 28 tens less than the number shown in the abacus?

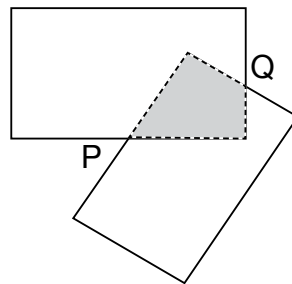 A. 2, 2
  B. 8, 2
  C. 2, 1
  D. 3, 0

Space for Rough Work

16. The given figure is formed by two rectangles. The length of each rectangle is 16 cm and its breadth is 10 cm. P and Q are the mid-points of the sides of the rectangles.
    Find the perimeter of the shaded part.
    A. 32 cm
    B. 26 cm
    C. 30 cm
    D. 28 cm

17. I am a 4-digit number. All my digits are different. They add up to 23. The one's digit is half the hundred's digit and the one's digit is double the ten's digit.
   What number am I?
    A. 9824   B. 8663   C. 7826   D. 9653

18. Put the correct sign to make the expression true.

    $$40 \times 87 - 12 \,\boxed{}\, 39 \times 65 - 24$$

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

19. The given table represents the number of visitors at a Zoo on a certain day, where each ◯ represents 40 visitors. Study it carefully and answer the question that follows.

Time	Number of visitors
10 am - 12 noon	◯ ◯ ◖
12 noon - 2 pm	◯ ◯ ◯ ◯
2 pm - 4 pm	◯ ◯ ◯ ◯ ◔
4 pm - 6 pm	◯ ◯ ◯ ◖
6 pm - 8 pm	◯ ◖

    If the price of an entrance ticket was ₹ 6, how much was collected from ticket sale on that day?
    A. ₹ 6500   B. ₹ 3900   C. ₹ 4500   D. ₹ 5400

Space for Rough Work

20. What is the number that is a multiple of 7 as well as a factor of 119?

    A. 28   B. 49   C. 17   D. 119

EVERYDAY MATHEMATICS

21. Sanya went to her friend's house at 9:45 am. Her mother told her to reach back home in 180 minutes. If given clock shows incorrect time when she reached back home then which of the following statements is correct?
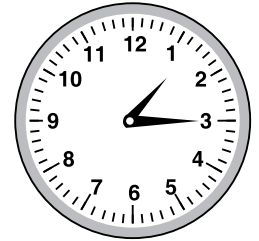
    A. Clock is 15 minutes slow.
    B. Clock is 30 minutes slow.
    C. Clock is 15 minutes fast.
    D. Clock is 30 minutes fast.

22. Komal wants to decorate the boundary of a rectangular design with lace. If she uses 48 cm length of lace costing ₹ 15 per cm, then which are the possible dimensions of design and total cost of lace?

    A. l = 16 cm, b = 8 cm and ₹ 1920   B. l = 8 cm, b = 4 cm and ₹ 720
    C. l = 4 cm, b = 8 cm and ₹ 620   D. l = 16 cm, b = 8 cm and ₹ 720

23. Rahul has 90 pens costing ₹ 1350. Shipra bought 7 dozen pens from him. How much amount did Shipra pay to Rahul?

    A. ₹ 1060   B. ₹ 960   C. ₹ 1260   D. ₹ 1360

24. Rehan's mother has gone to her friend's house on 19th December 2013 and stayed there for 1 month. If 11th January 2014 is Saturday, then on which day Rehan's mother left for her friend's house?

    A. Thursday   B. Saturday   C. Wednesday   D. Friday

25. Radhika bought $5\frac{1}{4}$ kg mangoes, $1\frac{1}{2}$ kg apples, $9\frac{1}{3}$ kg papayas. How much weight did she carry home?

    A. $16\frac{13}{12}$ kg   B. $16\frac{1}{12}$ kg   C. $15\frac{1}{13}$ kg   D. $15\frac{12}{13}$ kg

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Space for Rough Work

26. Pranav jogged $4\frac{1}{2}$ times around a rectangular field that measured 25 m by 12 m. What is the total distance he jogged?

    A. 323 m   B. 333 m   C. 433 m   D. 443 m

27. Garima went to movie with her two friends. She gave ₹ 1000 to counter for movie tickets, 1 bucket of popcorn and 3 pepsi cans, what information is needed to find the amount she will get back?

    A. Movie name
    B. Movie time
    C. Number of tickets
    D. Cost of a movie ticket

    ₹75

    ₹50

28. Ankur earns ₹ 20,098 in a month. Every month he spends ₹ 15,026 and saves the rest. How much will he save in 2 years?

    A. ₹ 21,728   B. ₹ 2,20,728   C. ₹ 1,21,728   D. ₹ 2,21,728

29. Sanchi takes 24 mins 25 sec to draw 15 rectangular designs. How long does she take to draw 30 rectangular designs if all are drawn in equal period of time?

    A. 48 mins 50 sec   B. 49 mins 50 sec   C. 49 mins 10 sec   D. 48 mins 10 sec

30. Manha can only pack 16 apples into a box. If there are 560 apples to be packed, how many boxes of apples will be there?

    A. 35   B. 15   C. 45   D. 25

ACHIEVERS SECTION

31. A number multiplied by 5 and then added to 209, become 364. Three times of the number is _____.
    Which of the following statements is/are true with respect to answer of the above question?
    Statement 1 : Greater than 85 and less than 95.
    Statement 2 : Number is multiple of 3.

    A. Only statement 1 is true   B. Only statement 2 is true
    C. Both statements 1 and 2 are true D. Neither statement 1 nor 2 is true

Space for Rough Work

32. Fill in the blank.

    Subtract 65 minutes from the sum of 140 minutes and _____. The answer is 2 hrs. 35 mins.

    A. 1 hr 20 mins   B. 1 hr   C. 1 hr 40 mins   D. 1 hr 25 mins
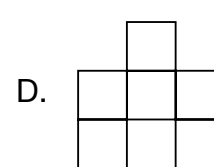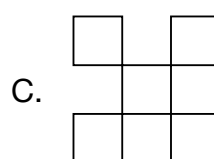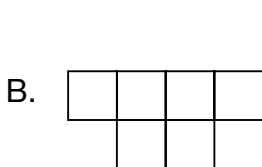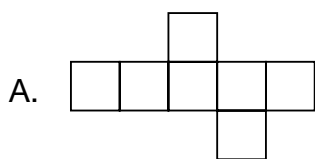
33. Which one of the following is INCORRECT?

    A. $2 \times \left(6 + \dfrac{8}{1000} + \dfrac{3}{100} \right) = 12.076$ B. $100 \times (87) = 8700$

    C. $4 \times \left(\dfrac{9}{10} - \dfrac{9}{100} \right) = 3.24$ D. $\dfrac{9}{5} \times \dfrac{4}{15} \times \dfrac{3}{2} \times \dfrac{5}{8} \times \dfrac{2}{5} \times \dfrac{0}{3} = 7.2$

34. Which one of the following figures, each made up of 3 cm squares, has the greatest perimeter?

    A.   B.   C.   D.

35. A number is greater than 50 but smaller than 59. It has only two factors. What is the number?

    A. 51   B. 55   C. 53   D. 57

Space for Rough Work