IMO 2025

Second Level

International Maths Olympiad

by **Maths Olympiad Foundation**

Time : 45 Mins | **Class-V** | **Maximum Marks : 50**

General Instructions:

1. **All questions are mandatory.** Read the questions carefully before selecting an answer.
2. The question paper contains **25 MCQ**, each carrying 2 **marks**.
3. No negative marking for unattempt questions; one mark will be deducted for each incorrect /overwriting or multiple answers. Illegible answers may not be evaluated.
4. Answers must be marked by writing the correct option **(A/B/C/D)** in the **Answer Sheet**.
5. **Use of calculators, smart watches, or any electronic devices is strictly prohibited.**
6. Rough work must be done **only in the A4 sheet provided by the invigilator**.
7. Ensure that your **Name, Roll Number, School Code, and other required details** are correctly filled in the Answer Sheet before submission.
8. The **final Answer Sheet along with the question paper must be submitted to the invigilator** before leaving the examination hall.
9. Any form of **unfair practice will lead to immediate disqualification**.

Q.1. The number of Rectangles that can be formed using 96 identical squares joining end to end are:

(a) 6 (b) 8 (c) 12 (d) 16

Q.2. The length of the edge of a cube is 58.8 cm. The area of the face of the cube is:

(a) 58.8 cm^2 (b) 3457 cm^2 (c) 58.8 cm^3 (d) 3457.44 cm^2

Q.3. Nine poles are erected on each side of the boundary of a square field. The distance between each Pole is 60 cm. The perimeter of the field is:

(a) 540 cm (b) 2160 cm (c) 1920 cm (d) 3840 cm

Q.4. The value of A + B + C in the given Puzzle is:

$$\begin{array}{r} A\ B\ C \\ \times\ 6 \\ \hline C\ C\ C \\ \hline \end{array}$$

(a) 7 (b) 6 (c) 4 (d) 13

Q.5. If 15 December 2006 is a Friday, then what will be the day of week on 13 October 2009?

(a) Friday (b) Monday (c) Saturday (d) Tuesday

Q.6. Find the missing number if a certain rule is followed:
Row-wise and Column-wise

384	**32**	**36**
261	**27**	**29**
?	**18**	**21**

(a) 108 (b) 124 (c) 126 (d) 132

Q.7. P is brother of Q. R is mother of Q. S is father of R. How is S related to P?

(a) Paternal Grand Father (b) Maternal Grand Father

(c) Father (d) Uncle

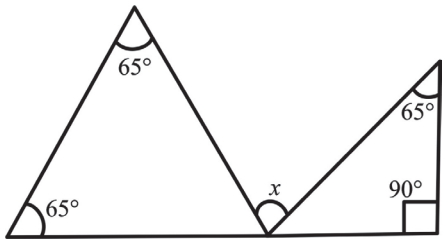
Q.8. Find the value of *x* in the given figure:

(a) 85°

(b) 95°

(c) 105°

(d) 115°



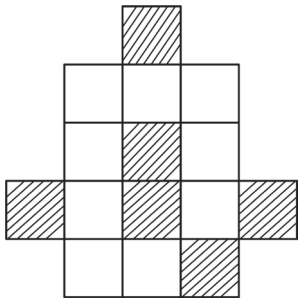
Q.9. Find the percentage of unshaded part in the given figure:

(a) 80%

(b) 70%

(c) 40%

(d) 60%



Q.10. Manpreet correctly remembers that he visited Punjab before thirteenth of August but after ninth of August his sister Jagpreet correctly remembers that Manpreet visited Punjab after eleventh of August but before fourteenth of August. On which date Manpreet visited Punjab?

(a) 11^{th} (b) 12^{th} (c) 10^{th} (d) 13^{th}

Q.11. Find the value of MMDCCCLX – MDCCLIII:

(a) MXCIX (b) MLXII (c) MXC (d) MCVII

Q.12. If two pipes of same size can fill a 500 L tank in $7\frac{1}{2}$ minutes, then how much time will be taken by one such pipe to fill alone a 1000 L tank?

(a) 50 minutes (b) $45\frac{1}{2}$ minutes

(c) 30 minutes (d) 15 minutes

Q.13. Which of the following statements are correct?

(I) Successor of the greatest six digits number is a million
(II) A prime number is always an odd number
(III) The sum of (5 tens and 20 hundredths) and (40 tens and 9 tenth) is 450.92
(IV) 91 is a Prime number

(a) II and III only (b) II and IV only
(c) I and III only (d) I, II and IV only

Q.14. A number is formed using the digits 3, 5, 7, 9 without repetiton. Which of the following numbers are divisible by 9?

(I) 3579 **(II) 5739**
(III) 9753 **(IV) 7593**

(a) I only (b) II, III and IV only
(c) All of the above (d) None of these

Q.15. The perimeter of a square is 64 cm. Which of the following statements are correct?

(I) Side = 16 cm **(II) Area = 256 cm^2**
(III) Diagonal = $16\sqrt{2}$ **(IV) Area = 128 cm^2**

(a) I, II and IV only (b) I, II and III only
(c) II, III and IV only (d) I, II, III and IV

Q.16. A number is multiplied by 4 and then divided by 8. Which of the following statements is not correct?

(I) The number becomes half
(II) The number becomes double
(III) The result is smaller than the original
(IV) The result is equal to the original

(a) I and III only (b) II and IV only
(c) I, II and III only (d) None of these

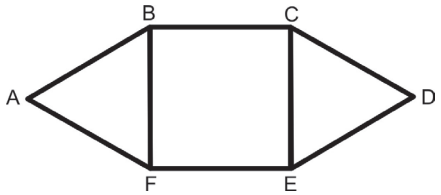
Q.17. The difference between a pair of numbers is 175 less than twice their sum. If the larger number is twice that of the smaller number, then their product is_____.

(a) 1750 (b) 2450 (c) 2250 (d) 4900

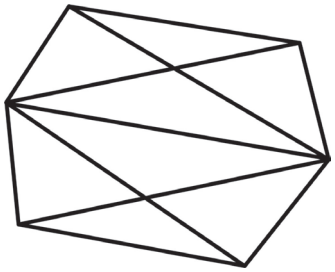
Q.18. In the given figure, there are two equilateral triangles each having a perimeter of 39 cm and a square. Find the distance travelled by Ant on the given path:

A → B → C → D → E → F → A

(a) 78 cm (b) 130 cm
(c) 104 cm (d) 117 cm

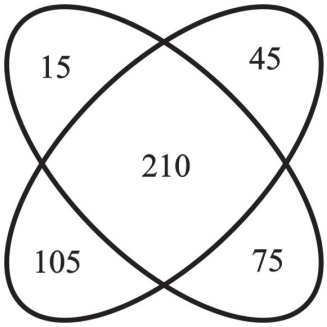


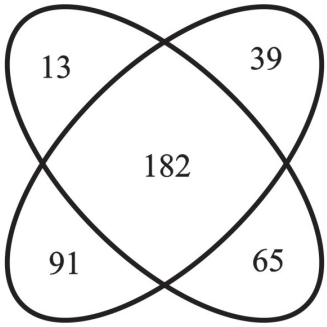
Q.19. The number of quadrilaterals in the given figure are_____:

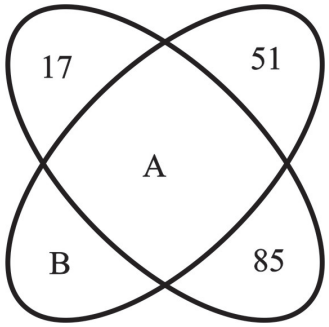


(a) 5
(b) 6
(c) 7
(d) 8

Q.20. Observe the pattern given below and find A–B:







(a) 119 (b) 170 (c) 238 (d) 357

Q.21. Look at the series and fill in the blank:

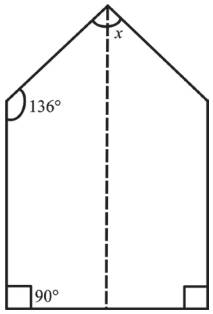
$X,\ XXII,\ XLVI,\ \_\_\_\_\_,\ CXC$

(a) XLVIII (b) LXXXII (c) XCVIII (d) XCIV

Q.22. If a $\triangle$ b means a + a – b, then the value of (7 $\triangle$ 3) $\triangle$ 2 is:

(a) 14 (b) 22 (c) 20 (d) 12

Q.23. If dotted line represents the line of symmetry, then the measure of $\angle x$ is:



(a) 44°
(b) 90°
(c) 88°
(d) 180°

Q.24. In a class V of a school, 40% students like music, $\frac{3}{15}$ like dance, $\frac{1}{10}$ like to swim, 5% like cricket and not painting. The remaining 40 students like painting. The number of students who like to dance is:

(a) 160 (b) 80 (c) 64 (d) 32

Q.25. 10% of a number is 100, then 100% of the same number is:

(a) 100 (b) 500 (c) 1000 (d) 10000