

**International Foundation Mathematics Olympiad(IFMO)**  
**CLASS 7**  
**WORKSHEET – 4**

**SECTION-A ( Logical Reasoning )**

1. Choose the appropriate number which follow the given pattern.



- a) 82  
b) 86  
c) 92  
d) 93
2. In each of the following questions, a number series is given with one missing term. Choose correct alternative that will continue the same pattern and fill in the blank spaces.

0.15, 0.3, \_\_\_\_\_, 1.2, 2.4

- a) 4.8  
b) 0.006  
c) 0.6  
d) 0.9
3. In each of the following letter series, some of the letters are missing, which are given in such order as one of the alternatives below it. Choose the correct alternative.

\_\_\_bc\_\_\_ca\_\_\_aba\_c\_ca

- a) abebb  
b) bbbec  
c) bacba  
d) abbec
4. In each of the following letter series, some of the letters are missing, which are given in such order as one of the alternatives below it. Choose the correct alternative.

ejo tyd ins xch?

- a) nrw  
b) mrw  
c) msx  
d) nsx
5. Choose the word which is different from the rest.
- a) Buffalo  
b) Stag  
c) Camel  
d) Rhinoceros

6. In a certain code, JANUARY, is written as RYUAANJ. Which word will be written as ERMBCEDE in that code?
- |              |            |
|--------------|------------|
| a) December  | c) October |
| b) September | d) August  |

7. In each of the following questions find out how many such pairs of letters are there in the given word each of which has as many letters between them in the word as in the English alphabet.

PARADISE

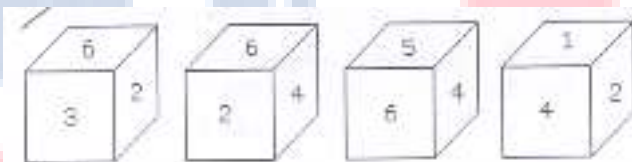
- |          |         |
|----------|---------|
| a) One   | c) Four |
| b) Three | d) Two  |
8. P is the mother of K; K is the sister of D; D is the father of J. How is P related to J?
- |                |                       |
|----------------|-----------------------|
| a) Mother      | c) Aunt               |
| b) Grandmother | d) Data is inadequate |

9. Given that:

- |                      |                       |
|----------------------|-----------------------|
| 1) A is brother of B | 3) D is brother of E  |
| 2) C is father of A  | 4) E is daughter of B |

The uncle of D is

- |      |      |
|------|------|
| a) A | c) C |
| b) B | d) D |
10. Which number is on the face opposite to 6?



- |      |      |
|------|------|
| a) 4 | c) 2 |
| b) 1 | d) 3 |

## SECTION-B ( Day to Day Mathematics )

11. What is the value of given number expression?

$$107 \times 107 + 93 \times 93 = ?$$

- |          |          |
|----------|----------|
| a) 15378 | c) 20098 |
| b) 16921 | d) 21368 |
12. What should be added to  $\frac{2}{9}$  to get -3?

- |                   |                   |
|-------------------|-------------------|
| a) $\frac{29}{9}$ | c) $\frac{31}{9}$ |
|-------------------|-------------------|

b)  $\frac{23}{9}$

d)  $-\frac{31}{9}$

13. The sum of two integers is 67. If one of them is -43, then what is the other?

a) 110

c) -24

b) -110

d) 24

14. Find the simplified value of

$79.1 - 27.73 + 18.07 - 46.37$

a) 23.07

c) 23.87

b) 24.07

d) 23.67

15. If 2 litres of water is evaporated on boiling from 8 litres of sugar solution containing 5% sugar, find the percentage of sugar in the remaining solution.

a)  $6\frac{2}{3}\%$

c)  $7\frac{1}{2}\%$

b)  $8\frac{1}{3}\%$

d)  $9\frac{2}{3}\%$

16. If  $5^a = 3125$ , then the value of  $5^{(a-3)}$  is:

a) 25

c) 625

b) 125

d) 1625

17. What is the mean of first eight odd natural numbers?

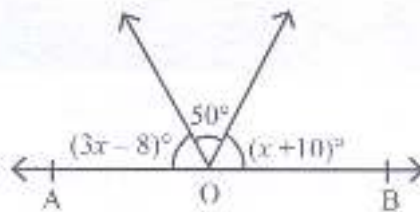
a) 8

c) 10

b) 9

d) 11

18. In the given figure, AOB is a straight line.  $\angle AOC = (3x - 8)^\circ$ ,  $\angle COD = 50^\circ$  and  $\angle BOD = (x + 10)^\circ$ . The value of x is



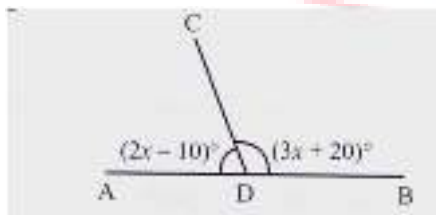
a) 42

c) 36

b) 52

d) 32

19. What is the value of x in the following figure?



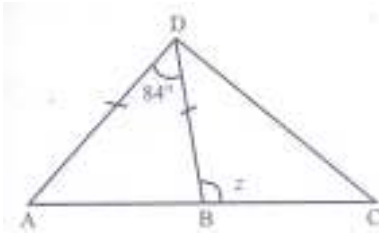
a)  $24^\circ$

c)  $44^\circ$

b)  $34^\circ$

d)  $54^\circ$

20. In the given figure, ABC is a straight line what is the value of z?



- a) 1120  
b) 920
- c) 1320  
d) None of these
21. In an isosceles triangle, the vertex angle is thrice of its base angle. What is the measure of vertex angle?
- a)  $90^\circ$   
b)  $75^\circ$
- c)  $108^\circ$   
d)  $112^\circ$
22. What is obtained after simplification of the expression  $[7 - 2x + 3y\{2x - y\}] - (4x + 7y - 5)$ ?
- a)  $8x - 3y + 12$   
b)  $-8x - 3y + 12$
- c)  $8x + 3y - 12$   
d) None of these
23. What is the median of first 15 odd numbers?
- a) 15  
b) 17
- c) 19  
d) 21
24. What is the least number of square tiles required to pave the floor of a room 15 m 17 cm long and 9 m 2 cm broad?
- a) 814  
b) 820
- c) 840  
d) 844
25. What is the capacity of a cylindrical tank?
- I. Radius of the base is half of its height which is 28 metres.  
II. Area of the base is 616 sq. metres and its height is 28 metres.
- a) I alone sufficient while II alone not sufficient to answer  
b) II alone sufficient while I alone not sufficient to answer  
c) Either I or II alone sufficient to answer  
d) Both I and II are not sufficient to answer.

ANSWER IFMO CLASS 7 – WORKSHEET - 4																			
1	C	2	C	3	A	4	B	5	C	6	A	7	B	8	B	9	A	10	B
11	C	12	A	13	A	14	A	15	A	16	A	17	C	18	D	19	B	20	C
21	C	22	B	23	B	24	A	25	C										

