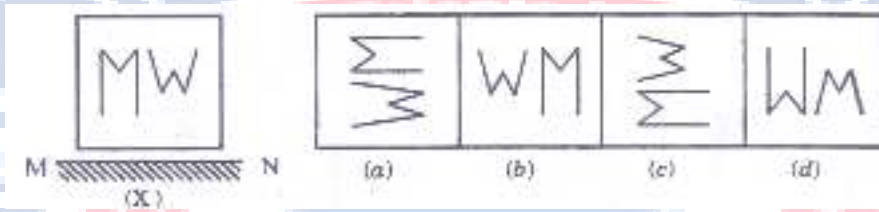


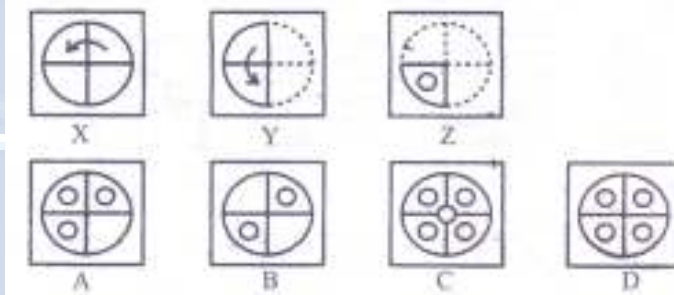
**CLASS 10**  
**WORKSHEET – 2**

**SECTION-A ( Logical Reasoning )**

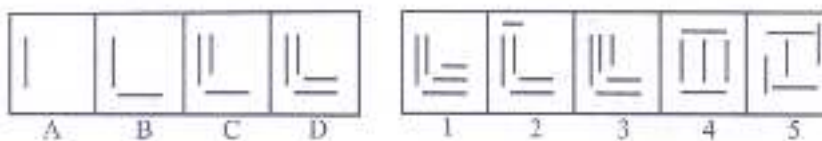
1. In the following question, choose the correct mirror-image of the Fig. (X) from amongst the four alternatives (a), (b), (c) and (d) given along with it. The mirror is represented by a line MN

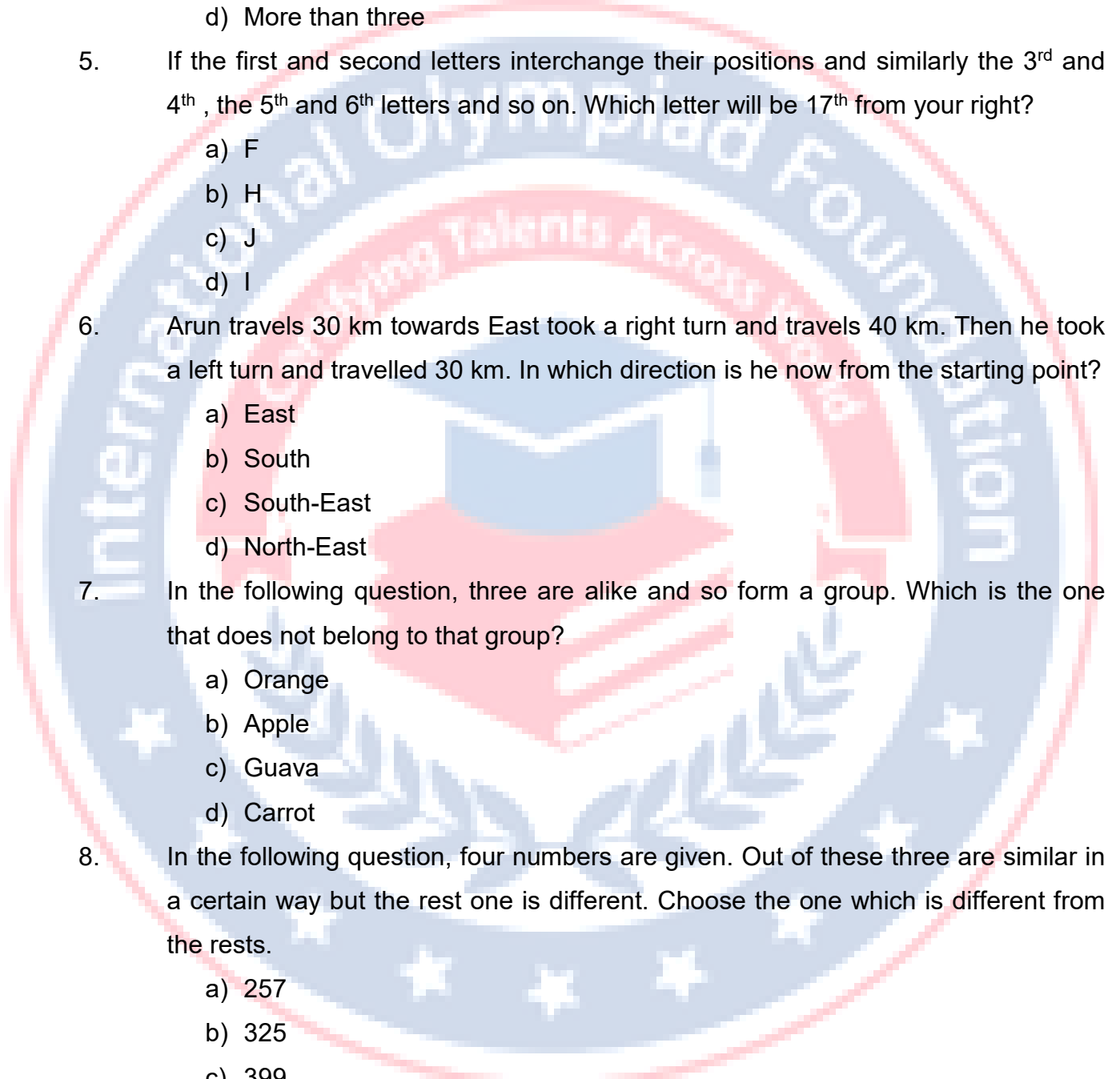


2. The following question consists of a set of three figures X,Y and Z showing a sequence of folding of a piece of paper. Fig (Z) shows the manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would most closely resemble the unfolded form of fig (Z).



3. The following question consists of four problem figures marked A,B,C and D and five Answer Figures marked 1,2,3,4, and 5. Select a figure form amongst the Answer Figures which will continue the series established by the four Problem Figures.



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4. Rearrange the first four letters in any way of the word DECISION. Find how many words can be formed by using all the four letters.
- a) One
  - b) Three
  - c) Two
  - d) More than three
5. If the first and second letters interchange their positions and similarly the 3<sup>rd</sup> and 4<sup>th</sup>, the 5<sup>th</sup> and 6<sup>th</sup> letters and so on. Which letter will be 17<sup>th</sup> from your right?
- a) F
  - b) H
  - c) J
  - d) I
6. Arun travels 30 km towards East took a right turn and travels 40 km. Then he took a left turn and travelled 30 km. In which direction is he now from the starting point?
- a) East
  - b) South
  - c) South-East
  - d) North-East
7. In the following question, three are alike and so form a group. Which is the one that does not belong to that group?
- a) Orange
  - b) Apple
  - c) Guava
  - d) Carrot
8. In the following question, four numbers are given. Out of these three are similar in a certain way but the rest one is different. Choose the one which is different from the rests.
- a) 257
  - b) 325
  - c) 399
  - d) 197

9. What number should replace the ?

$$211 : 333 :: 356 : ?$$

- a) 358
- b) 388
- c) 423
- d) 459

10. In question three words are given, which have something in common among themselves. Out of four given alternatives choose the most appropriate description about these words.

Magenta : Fawn : Turquoise

- a) These are colours
- b) They are migratory birds
- c) These are precious stones
- d) They are marine creatures

### SECTION-B ( Day to Day Mathematics )

11. In a pack of 52 playing cards, the king, the queen, the jack and 10 are lost, All these cards are of spade. A card is drawn from the remaining well shuffled pack. Find the probability of getting a king.

- a)  $\frac{3}{16}$
- b)  $\frac{1}{16}$
- c)  $\frac{1}{8}$
- d)  $\frac{1}{12}$

12. If the median of the data  $x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8$  is  $a$ , then find the median of the data  $x_3, x_4, x_5, x_6$ .

(where  $x_1 < x_2 < x_3 < x_4 < x_5 < x_6 < x_7 < x_8$ )

- a)  $a$
- b)  $\frac{a}{2}$
- c)  $\frac{a}{4}$

- d) Cannot say
13. A solid cylinder has height 12 cm and diameter 10 cm. A conical cavity of same height and same diameter is hollowed out. What is the total surface area of the remaining solid?
- a)  $660 \text{ cm}^2$
  - b)  $600 \text{ cm}^2$
  - c)  $560 \text{ cm}^2$
  - d)  $760 \text{ cm}^2$
14. On increasing each of the radius of the base and the height of a cone by 20%. By what percent its volume will be increased?
- a) 72.8%
  - b) 60%
  - c) 40 %
  - d) 30 %
15. What is the area of circle in which the difference between the radius and circumference of the circle is 37 cm?
- a)  $144 \text{ cm}^2$
  - b)  $154 \text{ cm}^2$
  - c)  $124 \text{ cm}^2$
  - d)  $224 \text{ cm}^2$
16. The perimeter of a sector of a circle of radius 5.2 cm is 16.4 cm, then what is area of sector?
- a)  $14.6 \text{ cm}^2$
  - b)  $15.6 \text{ cm}^2$
  - c)  $19.6 \text{ cm}^2$
  - d) None of these
17. If  $x = a (\operatorname{cosec} \theta + \cot \theta)$  and  $y = b (\cot \theta - \operatorname{cosec} \theta)$ , then
- a)  $xy - ab = 0$
  - b)  $xy + ab = 0$
  - c)  $\frac{x}{a} + \frac{y}{b} = 1$
  - d)  $x^2 y^2 = ab$

18. The centre of a circle is (4, 5) and A (8, 10) is a point on the circumference. Find the other end of diameter of the circle through A.
- (0, 0)
  - (0, 1)
  - (1, 0)
  - (2, 0)
19. If the point (x, 4) lies on a circle whose centre is at the origin and radius is 5, What is the value of x?
- $\pm 4$
  - 0
  - $\pm 3$
  - $\pm 5$
20. What is the perimeter of a rhombus the length of whose diagonal are 16 cm and 30 cm?
- 64 cm
  - 68 cm
  - 72 cm
  - 76 cm
21. The sum of n terms of the three arithmetic progression are  $S_1$ ,  $S_2$ ,  $S_3$ . The first term of each arithmetic progression is unity. The common differences are 1, 2, 3 respectively, then which of the following options is correct?
- $S_1 + S_3 = 2S_2$
  - $S_1 - S_3 = S_2$
  - $S_1 + S_2 = S_3$
  - $S_1 + S_3 = S_2$
22. A ball is shot from a cannon into the air with an upward velocity of 36 ft/sec. The equation that gives the height (h) of the ball at any time (t) is:  
 $h(t) = -16t^2 + 36t + 1.5$ . Find the maximum height attained by the ball.
- 21.75 ft
  - 1.125 ft
  - 1.5 ft
  - 2.25 ft

23. What are the values of x and y if  
 $x + y = a + b$   
 $ax - by = a^2 - b^2$ ?
- a, b
  - a, -b
  - a, 0
  - 0, b
24. What is the cubic polynomial in which the sum, sum of the products of its zeroes taken at a time and product of its zeroes are 2, -7, -14 respectively?
- $k(x^3 - 2x^2 - 7x + 14)$
  - $k(x^3 - 2x^2 + 8x - 14)$
  - $k(x^3 - 2x^2 - 7x - 4)$
  - $k(x^3 - x^2 - x - 14)$
25. Which of the following number has terminating decimal expansion?
- $\frac{17}{49}$
  - $\frac{21}{2^3 \cdot 5^6}$
  - $\frac{89}{2^3 \cdot 3^2}$
  - $\frac{37}{45}$

**ANSWER IFMO CLASS 10 – WORKSHEET - 2**

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