



MATHS

BOOKS - HT Olympiad Previous Year Paper

LOGICAL REASONING

Verbal Reasoning

1. A blacksmith has five iron articles A, B, C, D, and E, each having a different weight.

- 1) A weighs twice as much as B.
- 2) B weighs four-and-a-half times as much as C.
- 3) C weighs half as much as D.
- 4) D weighs half as much as E.
- 5) E weighs less than A but more than C.

Which of the above given statements is not necessary to determine the correct order of articles according to their weights ?

A. A

B. B

C. C

D. D

Answer: C



Watch Video Solution

2. In the given letter series how many Ps are there each of which immediately preceded by 'R', but not immediately followed by 'P' ?

PRPORPSTPOSRRPRQRSPR

A. 4

B. 3

C. 2

D. 1

Answer: C



Watch Video Solution

3. In a certain code language, 'po ki top ma' means 'Usha is playing cards', 'kop ja ki ma' means 'Asha is playing tennis', 'ki top sop ho' means they are playing foot-ball' and 'po sur

kop' means' cards and tennis. Which word in that languages means 'Asha'?

A. ja

B. ma

C. kob

D. top

Answer: A



Watch Video Solution

4. If \cap stands for '+', \subset stands for '-', \supset stands for 'x', \cup stands for '+', '||' stands for '=' and \rightarrow stands for '>', then which of the following expressions is not true ?

A. $(10 \cap 2) \supset (2 \cap 2) \rightarrow (10 \cup 2)$

B. $(20 \subset 8) \cup (4 \subset 1) || (4 \cap 1)$

C. $(12 \subset 4) \supset (5 \supset 1) \rightarrow (10 \cap 20)$

D. $(10 \cap 2) \supset (2 \cup 2) \rightarrow (10 \cup 2)$

Answer: B



Watch Video Solution

5. If 'P + Q' means 'P is the brother of Q', 'P x Q' means 'P is the father of Q', 'P + Q' means 'P is the mother of Q', then which of the following would represent 'R is the son of M' ?

A. $M \times S \times R$

B. $M + R \times S$

C. $M + R \times S$

D. $M \times R + S$

Answer: C



Watch Video Solution

6. Kirti walks 30 metres towards North. She then turns left and walks 50 metres. She again turns left and walks 30 metres. Further, she moves 10 metres after turning to the right. How far is she from her original position ?

A. 45 metres

B. 50 metres

C. 60 metres

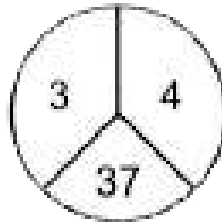
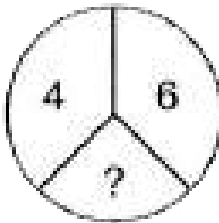
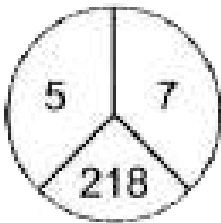
D. 40 metres

Answer: C



Watch Video Solution

7. Find the missing number, if the same rule is followed in all the three figures.



A. 152

B. 140

C. 88

D. 126

Answer: A



Watch Video Solution

8. Six books P, Q, R, S, T and U are placed side by side. R, Q and T have blue covers and other books have red covers. Only S and U are new

books and the rest are old, P, R and S are law reports, the rest are Gazetteers. Which two books are old Gazetteers with blue covers ?

A. Q and R

B. Q and T

C. Q and R

D. T and U

Answer: B



Watch Video Solution

9. How many pairs of letters are there in the word ADVENTURE which have the number of letters one more than the number of letters between them as in English alphabet ?

A. One

B. Two

C. Three

D. More than three

Answer: C



Watch Video Solution

10. In the question, two rows of numbers are given. The resultant number in each row is to be worked out separately based on the following rules and the question below the rows of numbers is to be answered. The operation on numbers progress from left to right.

Rules :

(i) If an odd number is followed by another composite odd number, then they are to be multiplied.

(ii) If an even number is followed by an odd number, then they are to be added.

(iii) If an even number is followed by a number which is a perfect square, then the even number is to be subtracted from the perfect square.

(iv) If an odd number is followed by an even number, then the second one is to be subtracted from the first one.

(v) If an odd number is followed by a prime odd number, then the first number is to be divided by the second number.

x 11 15

If x is the resultant of the first row, then what will be the resultant of the second row ?

A. 5

B. 10

C. 45

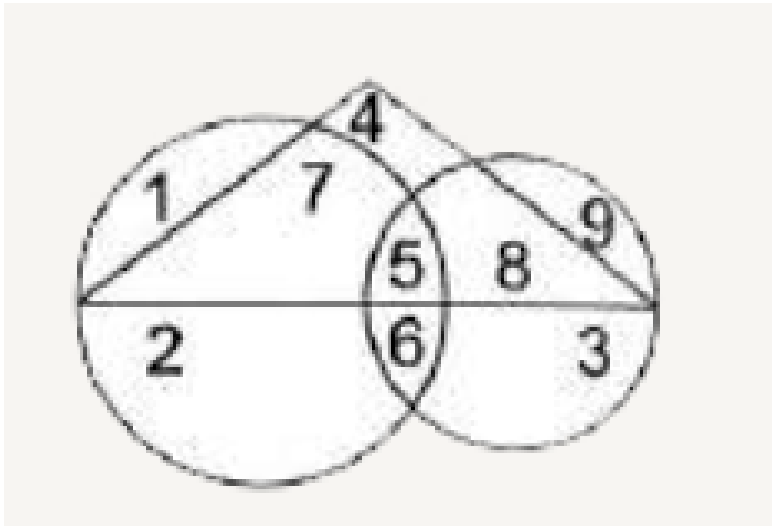
D. 75

Answer: D



Watch Video Solution

11. In the given Venn diagram, the triangle represents female graduates, small circle represents self-employed females and the big circle represents females with bank loan facility. Which number represents non-graduate self-employed females with bank loan facility ?



A. 2

B. 9

C. 6

D. 1

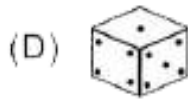
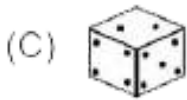
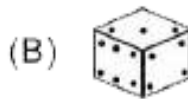
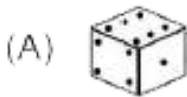
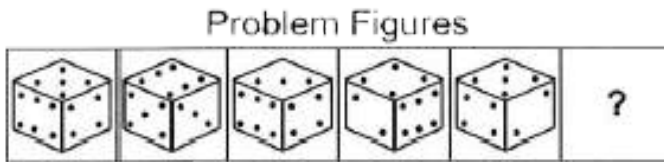
Answer: C



Watch Video Solution

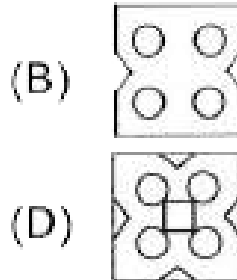
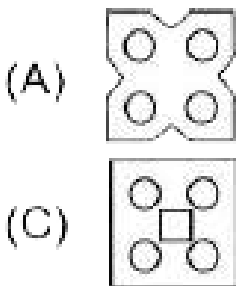
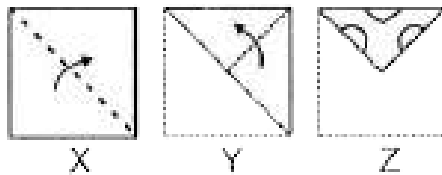
Non Verbal Reasoning

1. Which of the following figures will continue the same series as established by the Problem Figures ?



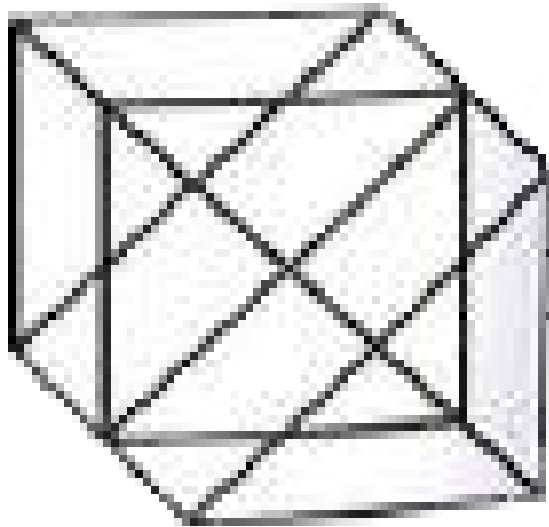
[Watch Video Solution](#)

2. The given 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. Select a figure from the options which would most closely resembles the unfolded form of Fig. (Z).





3. Find the number of triangles formed in the given figure.



A. 18

B. 20

C. 24

D. None of these

Answer: C



Watch Video Solution

4. Select the box from the given options, that will be formed by folding Fig. (X).

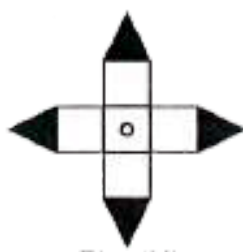


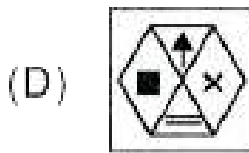
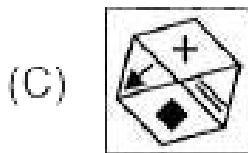
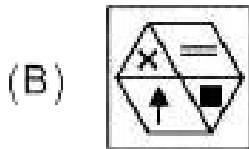
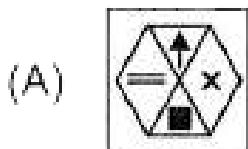
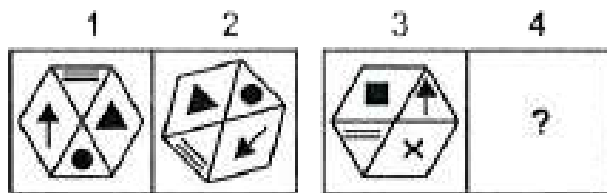
Fig. (X)



Watch Video Solution

5. There is a certain relationship between figures 1 and 2. Establish the similar relationship between figures 3 and 4 by choosing a figure amongst the options that

would replace the (?) in fig. (4).



[Watch Video Solution](#)

6. Find the correct mirror image of given combination of letters and numbers.

S3P075R8TS

A. 23P0V2P8T2

B. 23P0V2P8T2

C. 

D. 

Answer: A



Watch Video Solution

7. Select a figure from the options which satisfies the same conditions of placement of the dots as in Fig. (X).

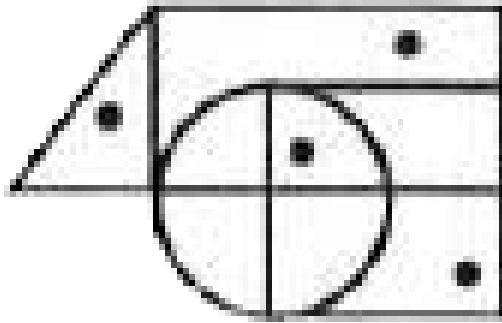
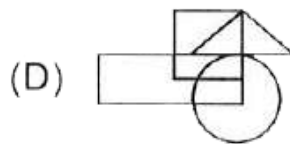
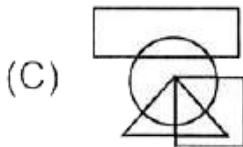
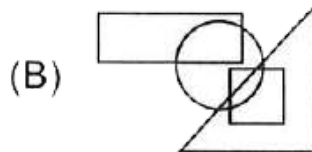
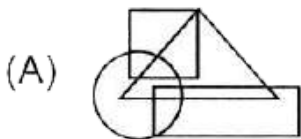
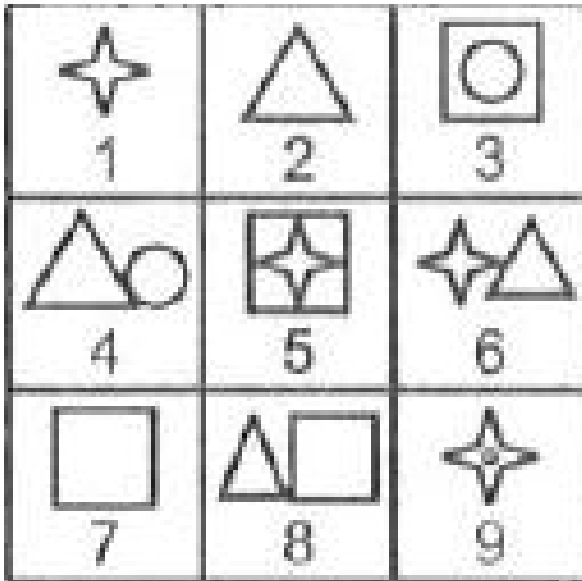


Fig. (X)



Watch Video Solution

8. Group the given figures into three classes using each figure only once.



A. 3, 4, 9, 5, 7, 8, 1, 2, 6

B. 1, 5, 6, 2, 4, 8, 3, 7, 9

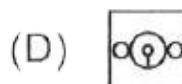
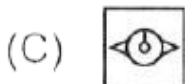
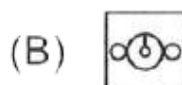
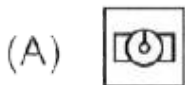
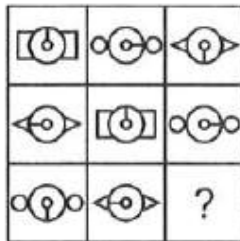
C. 4, 6, 8, 3, 5, 7, 1, 2, 9

D. 1, 2, 7, 3, 5, 9, 4, 6, 8

Answer: D

 **Watch Video Solution**

9. Select a figure from the options which completes the given figure matrix.





Watch Video Solution