# NON-VERBAL
ANALOGY & CLASSIFICATION

ANALOGY :

In this type, the problem Figures are presented in two units. The first unit contains two figures, one in each square. The second unit contains one figure in the first square and a questions mark (?) in the second you have to find out from among the figures A,B,C,D and E as to which one should replace the questions mark after finding the relationship between the two figures in the first unit of the problem figure. Some examples are discussed below.

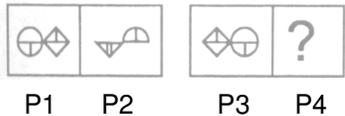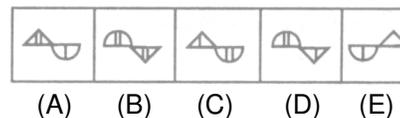**Ex.1**   **Problem Figures**   **Answer Figures**

P1   P2   P3   P4   (A)   (B)   (C)   (E)   (E)
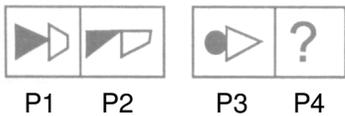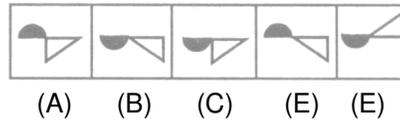
Sol.   (C) P2 contains the lower half of P1. Hence, answer figure C replaces the question mark.

Ex.2   **Problem Figures**   **Answer Figures**

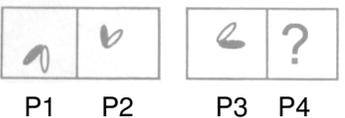P1   P2   P3   P4   (A)   (B)   (C)   (D)   (E)
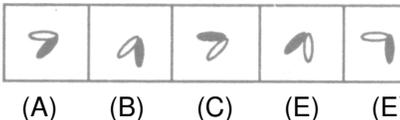
Sol.   (E) The lower LHS figure of portion in P1 becomes the upper portion in P2, shifted to the other side. Similarly RHS figure of the upper portion in P1 becomes the lower portion P2 shifted to the other side with one vertical line therein. The other two halves are deleted.

Ex.3   **Problem Figures**   **Answer Figures**

P1   P2   P3   P4   (A)   (B)   (C)   (E)   (E)

Sol.   (A) P1 is rotated 180^0 ACW or CW to obtain P2. Then the shaded and the unshaded leaves are interchanged. Hence, (A) should replace the questions mark.

CLASSIFICATION :

In these type of questions, five figures numbered (A), (B), (C), (D) and (E) are given. These are treated both problem Figures as well as the Answer figures. Four out of these five figures are related to each other by way of having some common characteristics ans so form a group. Out of these five, you have to identify one figure which does not belong to group.

Ex.4

(A)   (B)   (C)   (D)   (E)
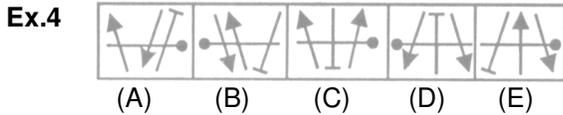
Sol. (C) Both the arrow heads are in the same direction in figure (C). In all other figures, they are in the opposite direction, Hence , (C) is the answer

Ex.5

(A)   (B)   (C)   (D)   (E)
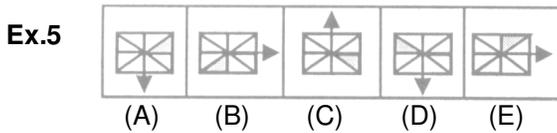
Sol. (E) Between the shaded portion and the arrow, there are two triangles in figure (A), (B), (C) and (D).

Ex.6

(A)   (B)   (C)   (D)   (E)
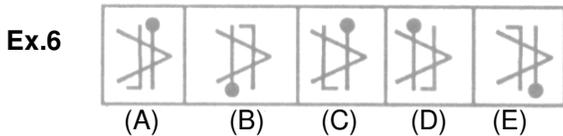
Sol. (C) Figures (A) and (D) form a group. The bars are interchanged here. Similarly, figure (B) and (D). Hence (C) is the odd one out.
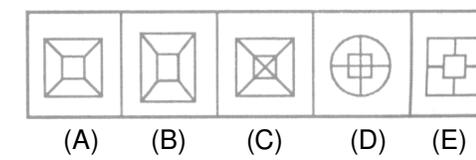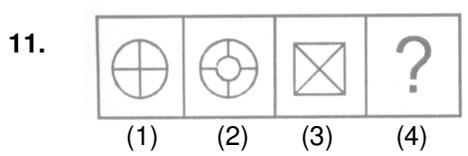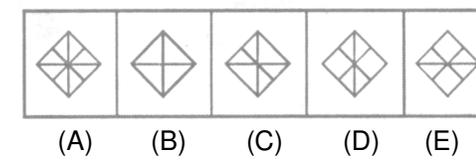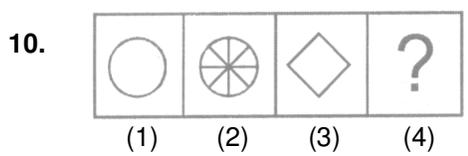
PRACTICE EXERCISE

Directions : (1 to 11) Figures 1' and 2 are related in a particular manner. Establish the same relationship between figures 3 and 4 by choosing a figure from amongst the five alternatives, which would replace the questions mark in figure (4).

Problem Figures   **Answer Figures**

1.

(1)   (2)   (3)   (4)   (A)   (B)   (C)   (D)   (E)

2.

(1)   (2)   (3)   (4)   (A)   (B)   (C)   (D)   (E)

3.

(1)   (2)   (3)   (4)   (A)   (B)   (C)   (D)   (E)

4.

(1) (2) (3) (4)   (A) (B) (C) (D) (E)

5.

(1) (2) (3) (4)   (A) (B) (C) (D) (E)

6.

(1) (2) (3) (4)   (A) (B) (C) (D) (E)

7.

(1) (2) (3) (4)   (A) (B) (C) (D) (E)

8.

(1) (2) (3) (4)   (A) (B) (C) (D) (E)

9.

(1) (2) (3) (4)   (A) (B) (C) (D) (E)

10.

(1) (2) (3) (4)   (A) (B) (C) (D) (E)

11.

(1) (2) (3) (4)   (A) (B) (C) (D) (E)

Directions : (12 to 16) *In each of the following problems, a related pair of figures is followed by five numbered pairs of figures. Select the pair that has a relationship similar to that in the original pair.*

12.

(x) (A) (B) (C) (D) (E)

13.

(x) (A) (B) (C) (D) (E)

14.

(x) (A) (B) (C) (D) (E)

15.

(x) (A) (B) (C) (D) (E)

16.

(x) (A) (B) (C) (D) (E)
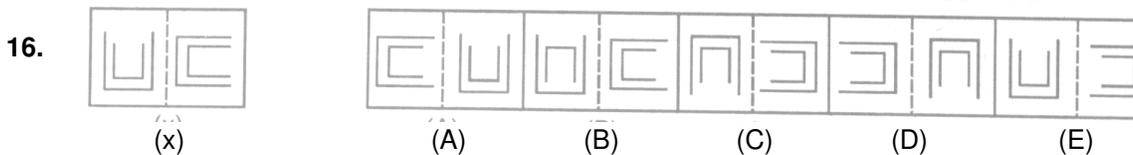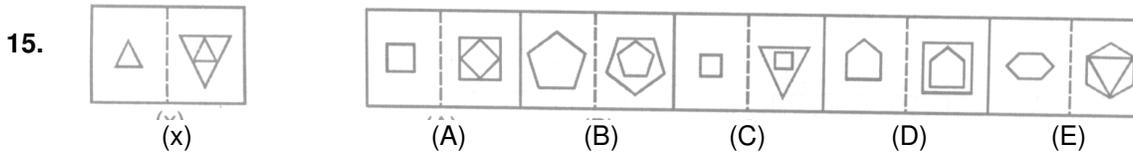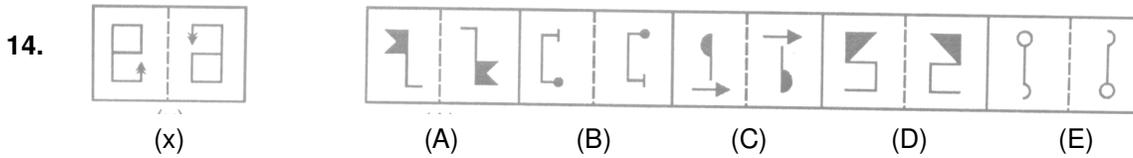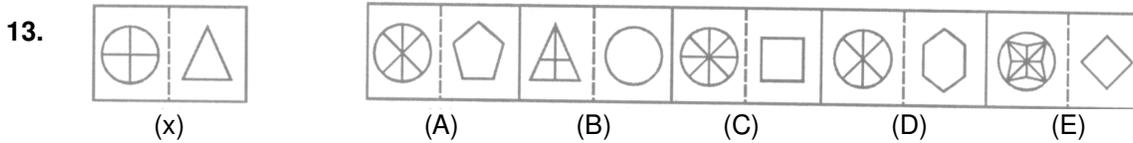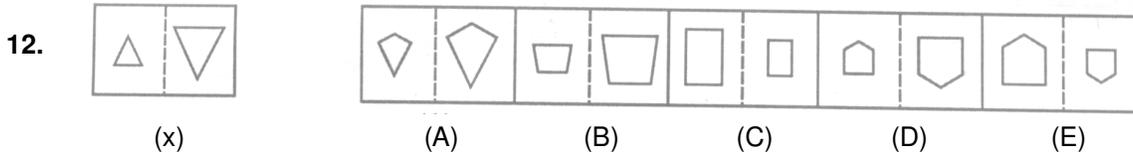
Directions : (17 to 21) *In each of the following questions, in four out of the given five pairs of figures, the first element is related to the second element in the same particular manner. Spot out the pair in which this relationship does not exist between the figures.*

17.

(i) (ii) (i) (ii) (i) (ii) (i) (ii) (i) (ii)
(A) (B) (C) (D) (E)

18.

(i) (ii) (i) (ii) (i) (ii) (i) (ii) (i) (ii)
(A) (B) (C) (D) (E)

19.

(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)
(A)		(B)		(C)		(D)		(E)	

20.

(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)
(A)		(B)		(C)		(D)		(E)	

21.

(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)
(A)		(B)		(C)		(D)		(E)	
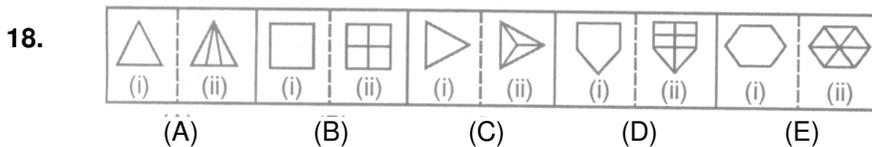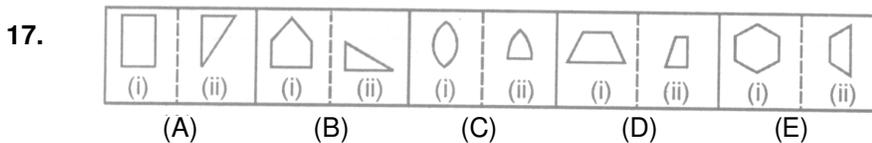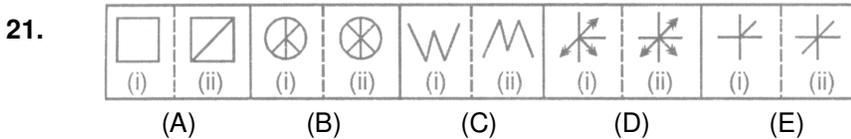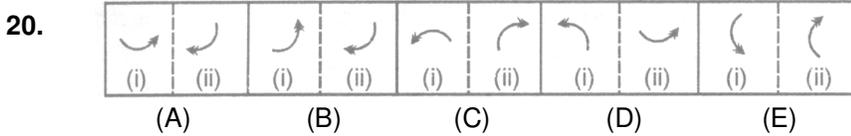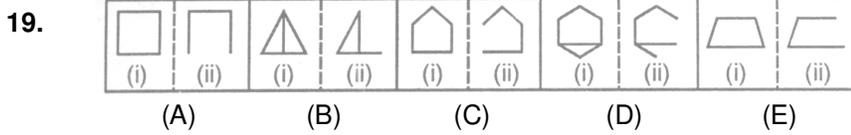
Directions : (22 to 26) *Each of the following questions bears four figure numbered 1,2,3 and 4 which constitute the Problem Set and four other figures numbered A,B,C and D which continue the Answer Set. Figures 1 and 2 are related in a particular way/ Establish a similar relationship between figures 3 and 4 by choosing a figure from the Answer set that would best substitute figure (4) in the Problem set. In case if none of the figures of the Answer set is suitable then answer is E.*

Problem   **Answer Figures**

22.

(1)	(2)	(3)	(4)		(A)	(B)	(C)	(D)

23.

| (1) | (2) | (3) | (4) | | (A) | (B) | (C) | (D) |

24.

| (1) | (2) | (3) | (4) | | (A) | (B) | (C) | (D) |

25.

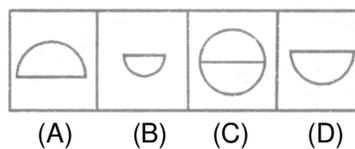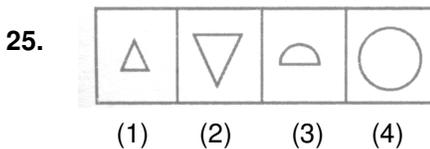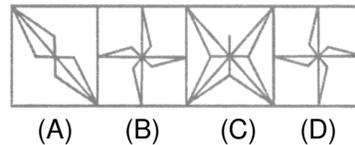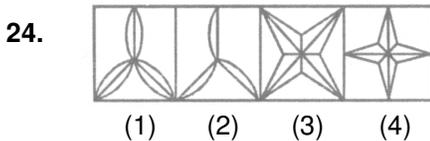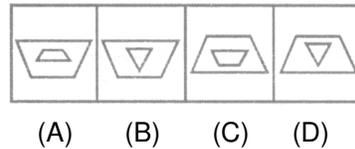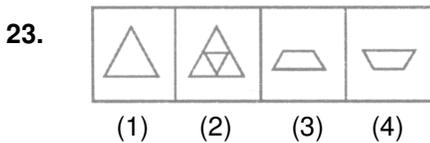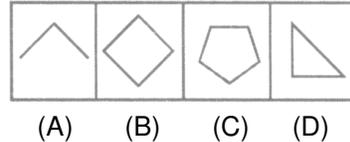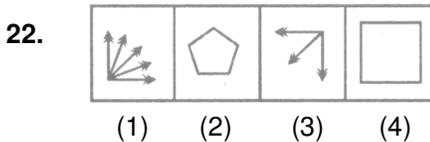| (1) | (2) | (3) | (4) | | (A) | (B) | (C) | (D) |

26.

(1) (2) (3) (4)   (A) (B) (C) (D)

Directions: (27 to 41) Out of the five figures (A), (B), (C), (D) and (E), given in each problem, four are similar in a certain way. However, one figure is not like the other four. Choose the figure which is different from the rest.

27.

(A) (B) (C) (D) (E)

28.

(A) (B) (C) (D) (E)

29.

(A) (B) (C) (D) (E)

30.

(A) (B) (C) (D) (E)

31.

(A) (B) (C) (D) (E)

32.

(A) (B) (C) (D) (E)

33.

(A) (B) (C) (D) (E)

34.

J	F	M	A	T
(A)	(B)	(C)	(D)	(E)

35.

(A)　　(B)　　(C)　　(D)　　(E)

36.

(A)　　(B)　　(C)　　(D)

37.

(A)　　(B)　　(C)　　(D)　　(E)

38.

(A)　　(B)　　(C)　　(D)

39.

(A)　　(B)　　(C)　　(D)　　(E)

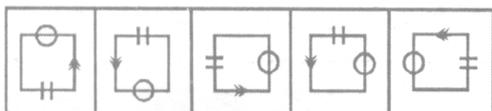**40.**

(A)　　(B)　　(C)　　(D)　　(E)

41.
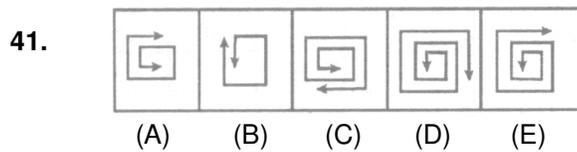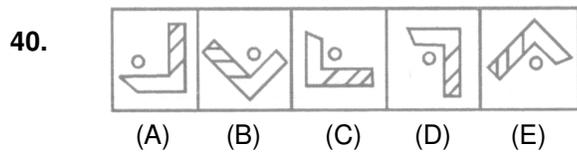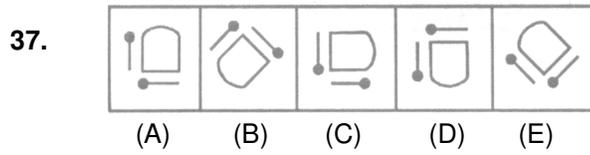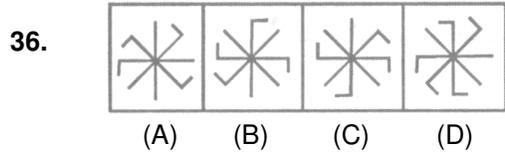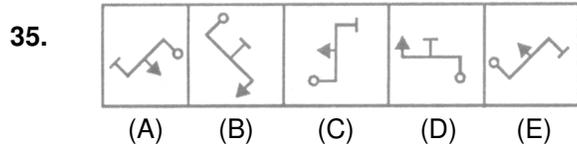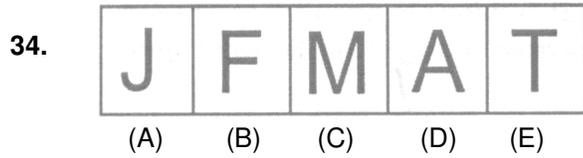
(A)　　(B)　　(C)　　(D)　　(E)

Directions : (42 to 46) *The following problems contain four numbered figures (1,2,3 and 4) forming the Problem Set and five numbered figures (A,B,C,D & E) forming the Answer Set. The four Problem figures have certain common features. Select a figure from amongst the Answer Figures which is similar to the Problem Figures.*

Problem Figures   **Answer Figures**

42.
      (1)   (2)   (3)   (4)   (A)   (B)   (C)   (D)   (E)

43.
      (1)   (2)   (3)   (4)   (A)   (B)   (C)   (D)   (E)

44.
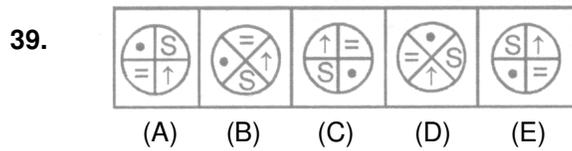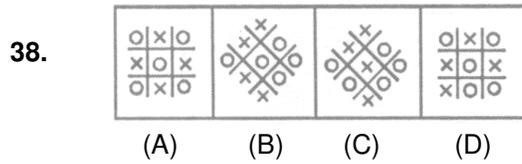   (1)   (2)   (3)   (4)   (A)   (B)   (C)   (D)   (E)

45.
      (1)   (2)   (3)   (4)   (A)   (B)   (C)   (D)   (E)

46.
      (1)   (2)   (3)   (4)   (A)   (B)   (C)   (D)   (E)
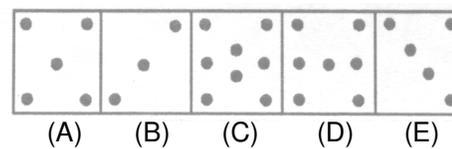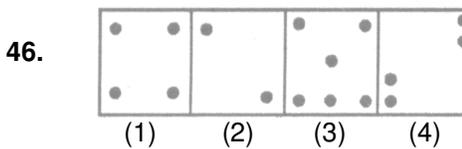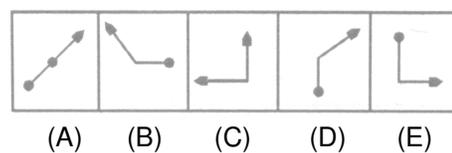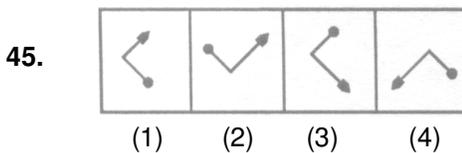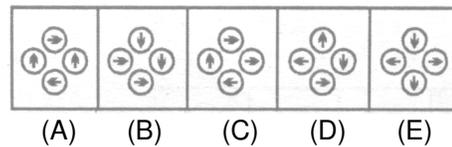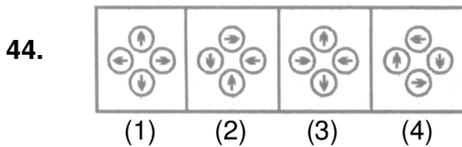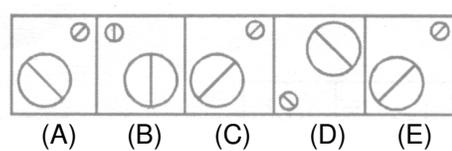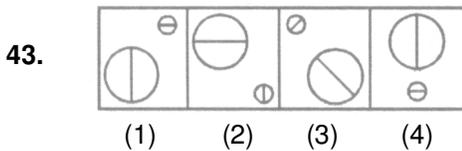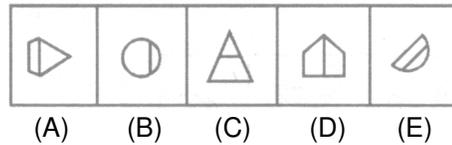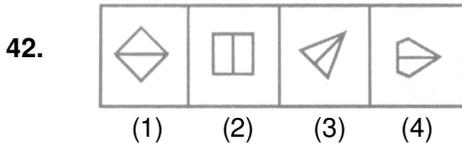
ANSWERS

Que.	1	2	3	4	5	6	7	8	9	10	11	12
Ans.	C	B	C	C	B	B	E	E	D	A	A	D
Que.	13	14	15	16	17	18	19	20	21	22	23	24
Ans.	A	A	B	C	B	D	D	C	C	D	C	A
Que.	25	26	27	28	29	30	31	32	33	34	35	36
Ans.	D	C	A	D	D	C	D	C	B	E	D	D
Que.	37	38	39	40	41	42	43	44	45	46		
Ans.	B	A	B	B	E	D	A	D	E	C		

PYRAMIDS & MISCELLANEOUS

➤➤➤

◀◀◀

PYRAMIDS :

Brief review of concepts : The questions in this unit are based on the pyramid of numbers from 1 to 100, we given below.

```
                    1
                   2 3 4
                  9 8 7 6 5
               10 11 12 1 14 15 16
            25 24 23 22 21 20 19 18 17
         26 27 28 29 30 31 32 33 34 35 36
      49 48 47 46 45 44 43 42 41 40 39 38 37
   50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
81 80 79 78 77 76 75 74 73 7 71 70 69 68 67 66 65
82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
```

Many types of questions are possible based on the above pattern from instance, formation of parallel lines, perpendicular lines, triangles, squares, etc. by taking numbers in order.

Type 1 Fill the blanks from the choice given below.

129 : 145 :: 3811 : ?

(A) 3713   (B) 3289   (C) 346   (D) 3614   (E) 3615
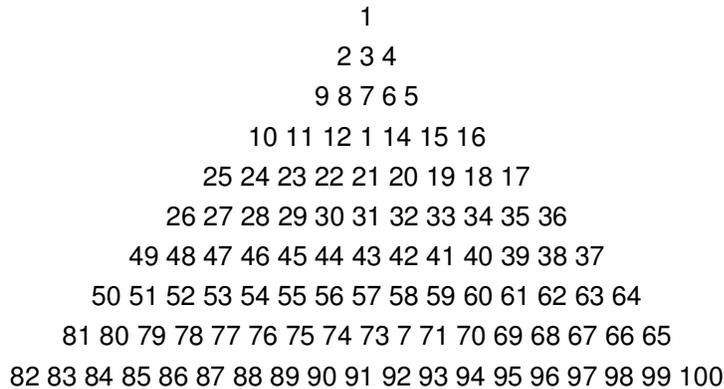
There are two groups of numbers. The number on the right hand side must have the same relations as the numbers on the left hand side. 129 and 1245, in the above pyramid, form a pattern.

Hence the number in the blank on the right hand side must form same pattern with 3811. Therefore, the answer is 3615 which form the pattern.
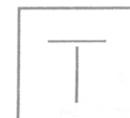
Type 2 Fill the blank from the choice given below.

2812 : 765 : 91123 : ?

(A) 12110   (B) 121314   (C) 122132   (D) 303132   (E) 122230

The two numbers on the left hand side form perpendicular lines in the pyramid. Therefore, the numbers on the right hand side must be of the same pattern. The answer to the above questions should be (B) 121314 to satisfy the same relation.
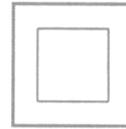
Type 3 Fill be blanc form the choice given below.

234 : 4614 :: 2812 : ?

(A) 3713　　　　(B) 34614　　　　(C) 121314　　　　(D) 131415　　(E) 122239

The numbers on the left-hand side form two side of a square. The numbers have been chosen in continuity. 2812 and 121314 are in continuity and form the other two sides of the same square. Hence the answer is (C).

Type 4 Fill the blank from the choice given below.

507986 : 772112 :: 537689 : ?

(A) 745742　　　　(B) 735841　　　　(C) 716039　　　　(D) 755643　　(E) 775543

Hence two numbers on the left-hand side form perpendicular lines. Therefore, the numbers on the right-hand side must form the same point, taking numbers in order. Hence the answer is (A) 745742.

Type 5 Fill the blank from the choice given below.

322120 : 321920 : : 324342 : ?

(A) 324142　　(B) 324132　　(C) 323143　　(D) 323319　　(E) 324133

The numbers on the left-hand side form a triangle. Therefore, the numbers on the right-hand side must form a triangle with common point 32. Hence, the answer is (A) 324142.

MISCELLANEOUS :

Ex.1 Select a figure form the four alternatives, which when placed in the blank space of figure (X) would complete the pattern.


(X)　　(A)　　(B)　　(C)　　(D)
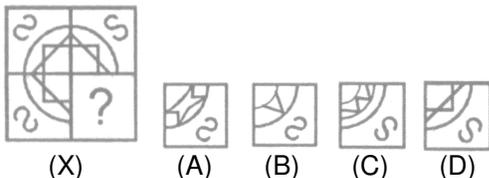
Sol. (D) Clearly, figure (D) will complete the pattern when placed in the blank space of figure (X) as shown below.

Ex.2 In the following questions problems, a square transparent sheet with a pattern is given. Figure out form amongst four alternatives as to how the patter would appear when the transparent sheet is folded at the dotted line.


(X)　　　(A)　　　(B)　　　(C)　　　(D)
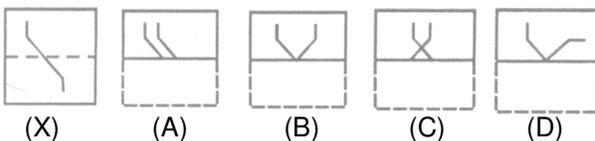
Sol. (B) Clearly, the lower half of the square sheet has been folded over the upper half. Hence, the bent life in the lower half will be inverted over the other half so that a "V" shaped figure is formed.

Ex.3 Consider the following three figures, marked X, Y, Z showing one fold in X, another in Y and cut in Z. From amongst the answer figures A,B,C and D, select the one, showing the unfolded position of Z.

X   Y   Z

(A)   (B)   (C)   (D)
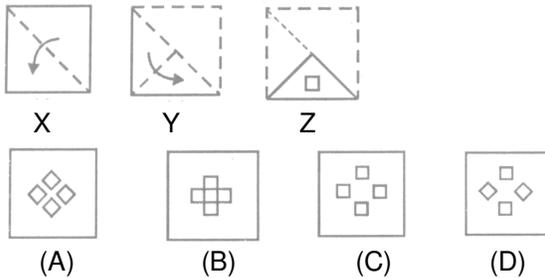
Sol. (C) In figure X, the upper triangular half of the paper has been folded over the lower half. In figure, Y, the paper is refolded to a quarter triangle. In figure Z, a square has been punched in the folded paper. Clearly the square will appear in each of the triangular quarters of the paper. Thus, when the paper is unfolded, four squares will appear symmetrically over it and it will resemble figure (C).

Ex4. *In the following question, choose the alternative figure in which the question figure (X) is embedded.*

(X)   (A)   (B)   (C)   (D)
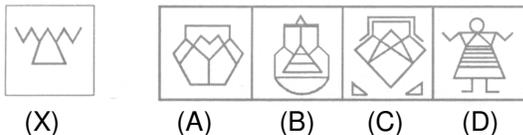
Sol. (D) it is clear from the alternative figures that figure (X) is embedded in figure (D)
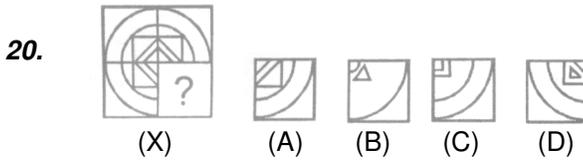
PRACTIVE EXERCISE

Directions : (1 to 12) Fill the blanks in the following questions from the choice given below. Which are based on pyramids.

1. 192021 : 213241 :: 414243 : ?
(A) 433023   (B) 435871   (C) 414039   (D) 435773

2. 494852 : 818084 :: 101123 : ?
(A) 131221   (B) 494852   (C) 252428   (D) 262747

3. 432946 : 443241 :: ? : 706267
(A) 725675   (B) 695972   (C) 705873   (D) 696366

4. 171210 : 31311 :: 19415858 : ?
(A) 335957   (B) 333342   (C) 333460   (D) 325961

5. 151933 : 425774 :: 132131 : ?

(A) 435675   (B) 445576   (C) 455477   (D) 304554

6. 3812 : 3614 :: 284753 : ?

(A) 284654   (B) 282930   (C) 294456   (D) 284555

7. 151835 : 193439 :: 274655 : ?

(A) 274654   (B) 465674   (C) 475475   (D) 455673

8. 324356 : 324160 :: 425774 : ?
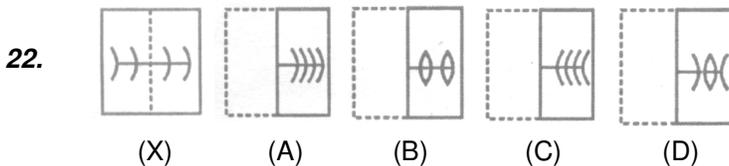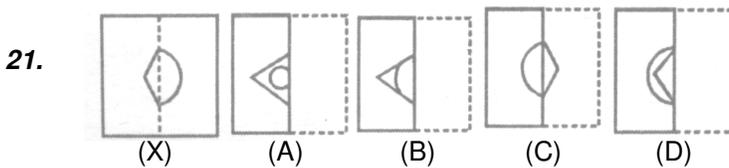
(A) 425970   (B) 425971   (C) 423122   (D) 322112

9. 474849 : 495277 :: 777879 : ?

(A) 795149   (B) 795247   (C) 527978   (D) 525377

10. 56443022 : 131415 :: 18344060 : ?

(A) 604132   (B) 595857   (C) 717273   (D) 606162

11. 252845 : 274655 :: 264754 : ?

(A) 102330   (B) 495277   (C) 485376   (D) 262510

12. 767574 : 564430 :: 899091 : ?

(A) 929394   (B) 917357   (C) 765446   (D) 735743
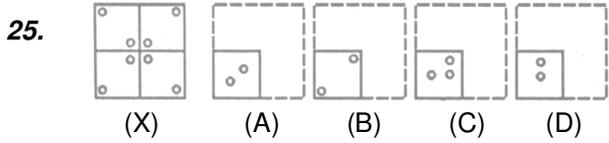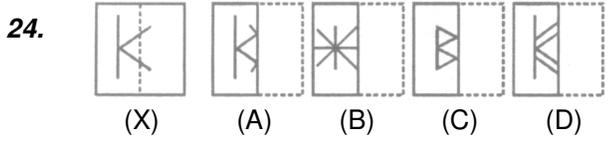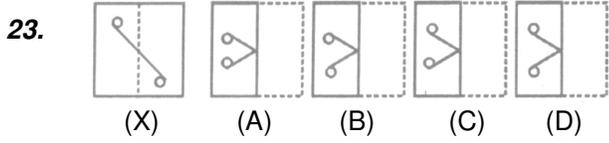
Directions : (13 to 20) Select a figure form the alternative which when placed in the blank space of (x) would complete the pattern ?

13.

(X)   (A)   (B)   (C)   (D)

14.

(X)   (A)   (B)   (C)   (D)

15.

(X)   (A)   (B)   (C)   (D)

16. (X)   (A)   (B)   (C)   (D)

17. (X)   (A)   (B)   (C)   (D)

18. (X)   (A)   (B)   (C)   (D)

19. (X)   (A)   (B)   (C)   (D)

20. (X)   (A)   (B)   (C)   (D)
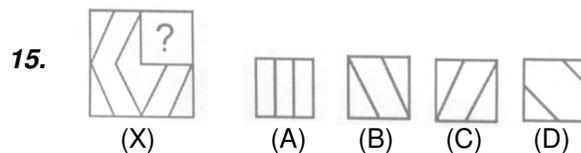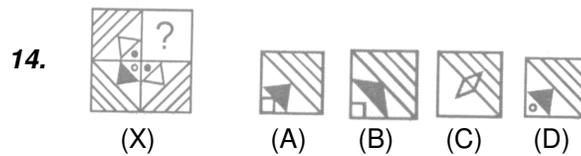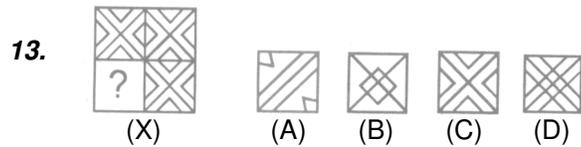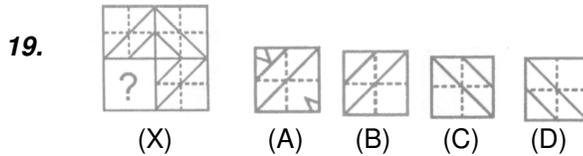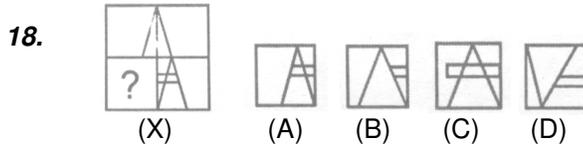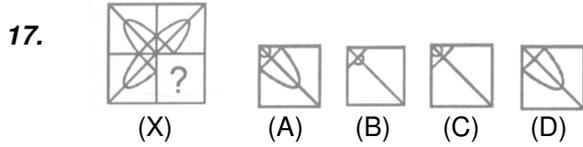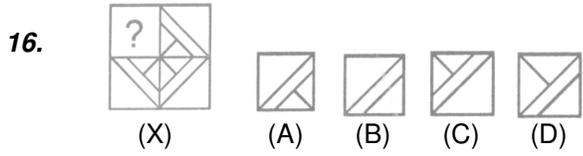
Direction : (21 to 25) A square transparent sheet with a pattern is given in figure X. Find out form amongst the alternatives as to how the pattern would appear when the transparent sheet is folded at the doted line.

21. (X)   (A)   (B)   (C)   (D)

22. (X)   (A)   (B)   (C)   (D)

23.

(X)   (A)   (B)   (C)   (D)

24.

(X)   (A)   (B)   (C)   (D)

25.

(X)   (A)   (B)   (C)   (D)

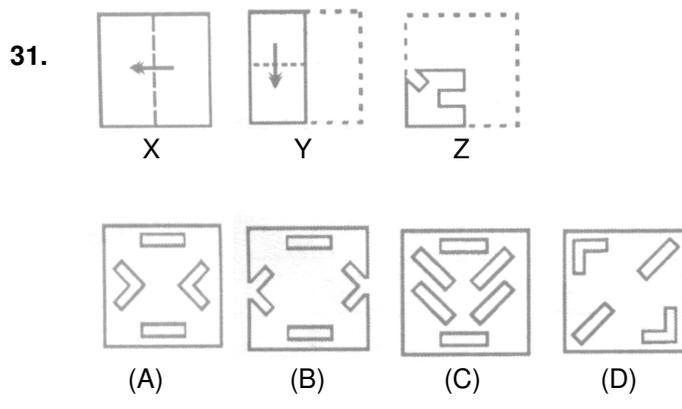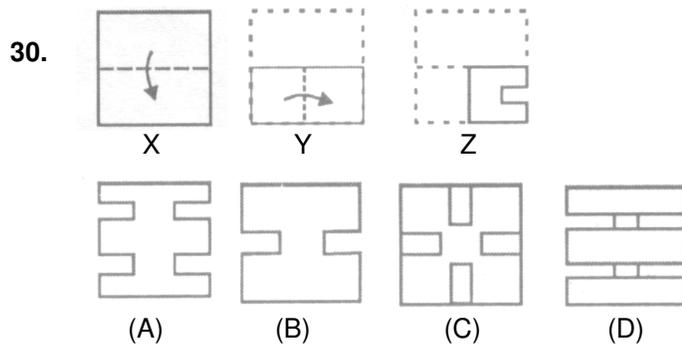**Directions : (26 to 32) A sheet has been folded in the manner as shown in X, Y and Z respectively and punched. You have to choose from the alternatives how it will look when unfolded.**

26.

X   Y   Z

(A)   (B)   (C)   (D)

27.

X   Y   Z

(A)   (B)   (C)   (D)

28.

X Y Z

(A) (B) (C) (D)

29.

X Y Z

(A) (B) (C) (D)

30.

X Y Z

(A) (B) (C) (D)

31.

X Y Z

(A) (B) (C) (D)

32.

X   Y   Z
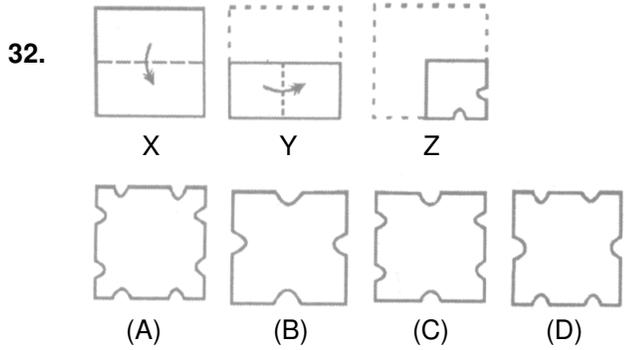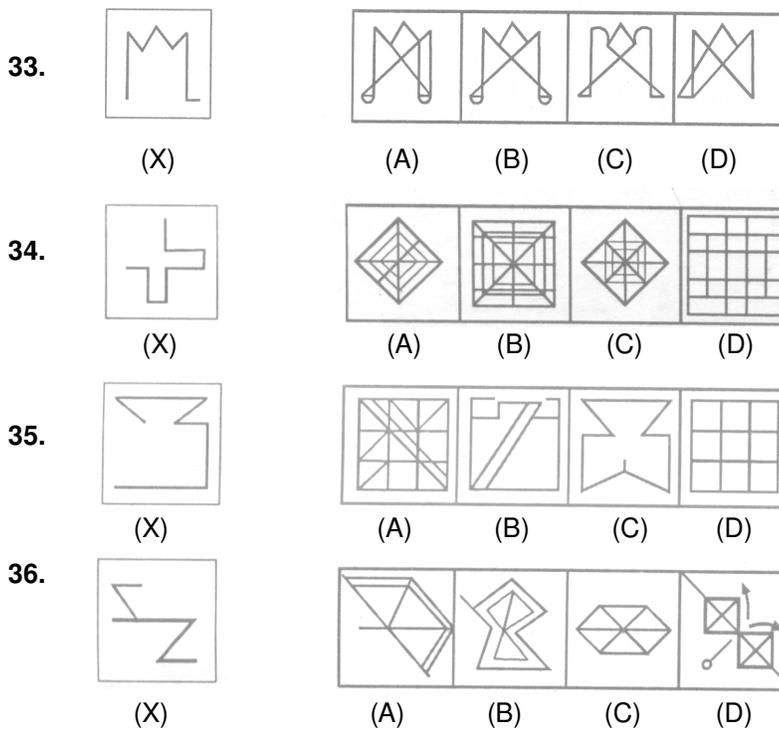
(A)   (B)   (C)   (D)
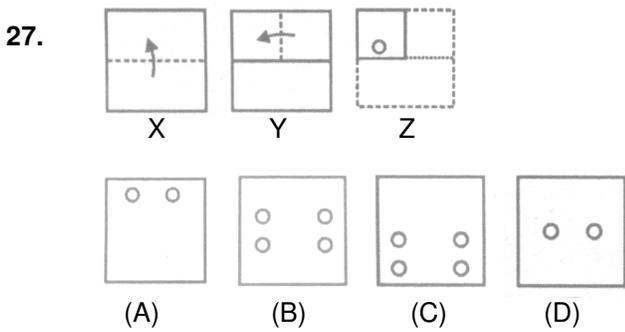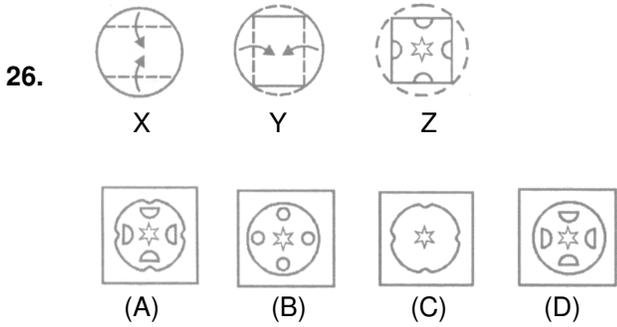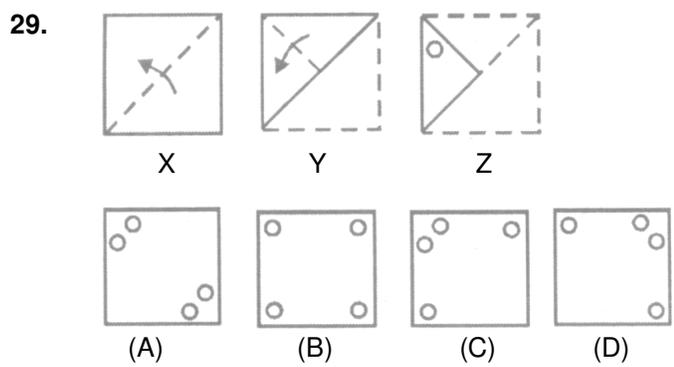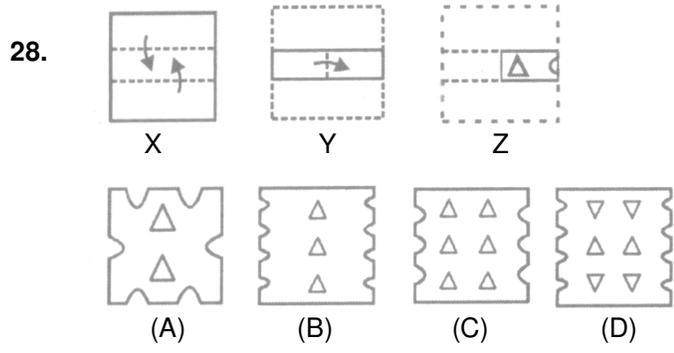
bDirections : (33 to 36) In each of the following questions, choose the alternative figure in which the questions figure (X) is embedded.

33.

(X)   (A)   (B)   (C)   (D)

34.

(X)   (A)   (B)   (C)   (D)

35.

(X)   (A)   (B)   (C)   (D)

36.

(X)   (A)   (B)   (C)   (D)

ANSWERS

Que.	1	2	3	4	5	6	7	8	9	10	11	12
Ans.	B	D	B	A	B	D	C	A	B	C	C	D
Que.	13	14	15	16	17	18	19	20	21	22	23	24
Ans.	C	D	B	A	D	A	C	A	D	B	D	A
Que.	25	26	27	28	29	30	31	32	33	34	35	36
Ans.	B	B	B	D	A	A	B	A	B	D	A	D