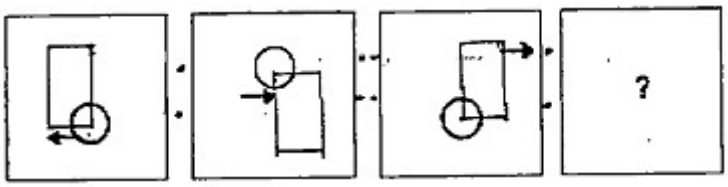
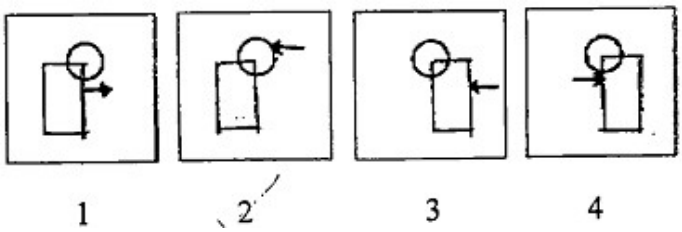
# NATIONAL TALENT SEARCH EXAMINATION-2020-21, MAHARASHTRA
## MENTAL ABILITY TEST (MAT)_ PAPER & HINTS & SOLUTION

**Directions : (1 to 3)** In each of the following questions there is a specific relationship between the first and second figure. The same relationship exists between the third and fourth figure which will replace the question mark. Select the correct option from the given alternatives.

**1. Questions figures**



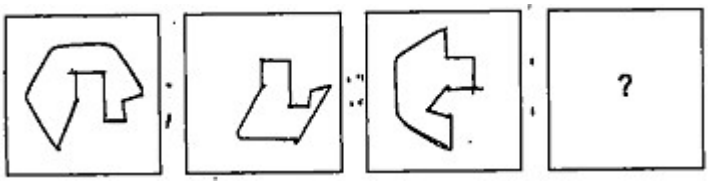

**Answer figures**



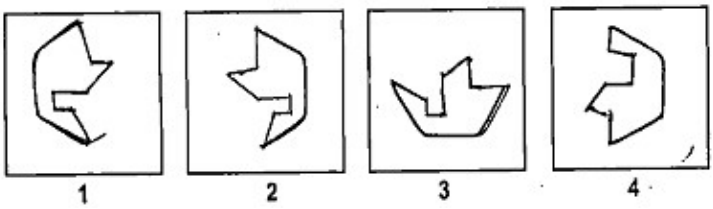

**Ans. (2)**

**Sol. By observation**

**2. Questions figures**



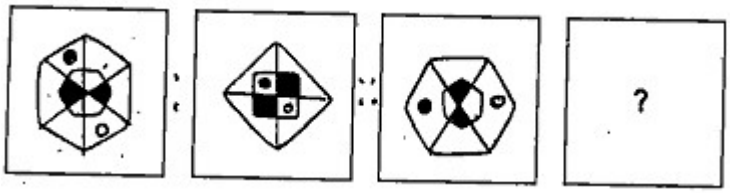

**Answer figures**



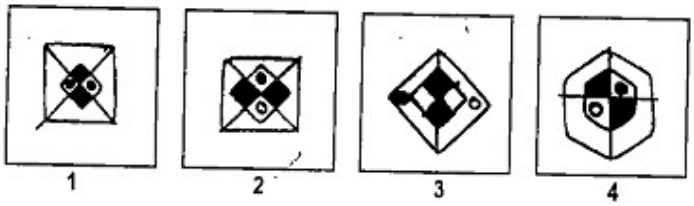

**Ans. (4)**

**Sol. By observation**

**3. Question figures**




**Answer figures**




**Ans.** **(2)**

**Sol.** **By observation**

**4.** A B Z Y C D X W E F V U G H T S I J R Q K L P O M N

Observe the letter series and observe letter which is at the central place of letters which is at 8th place from the left and at 13th place from right, find the serial number of that letter from left?

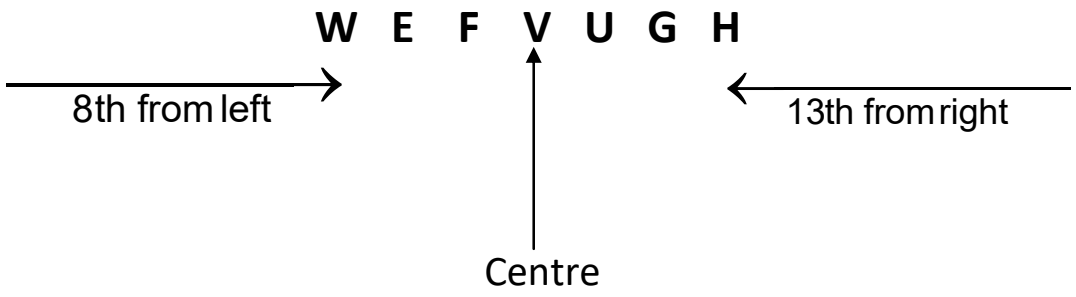
(1) 13 (2) 14 (3) 16 (4) 11

**Ans.** **(4)**

**Sol.** **8th place from left = W**

**13th place from right = H**

**Series**




**So V is 11th from left**

**Directions : (5 to 8)** Which number will replace the question mark in the given series. Select the correct number from the given alternatives.

**5.** 68, 54, 45, 34, 27, ?

(1) 13 (2) 17 (3) 18 (4) 21

**Ans.** **(3)**

**Sol.** **68, 54, 45, 34, 27**

**68 – (6+8) = 54**

**54 – (5 + 4) = 45**

**45 – (5 + 4) = 36**

**36 – (6 + 3) = 27** **34 – (4 + 3) = 27**

**27 – (7 + 2) = 18**

**Question should be bonus in place of 34 in question it must be 36**

**6.** 18, 30, 48, 72, 96, ?

(1) 96 (2) 106 (3) 115 (4) 120

**Ans.** **(1)**

**Sol.** **18 × 2 – 6 = 30**

**30 × 2 – 12 = 48**

**48 × 2 – 24 = 72**

**72 × 2 – 48 = 96**

**96 × 2 – 96 = 96**

**7.** 8, 1, 9, 10, 19, 29, ?, 77

(1) 38 (2) 48 (3) 52 (4) 56

**Ans.** **(2)**

**Sol.** **8 + 1 = 9**

**9 + 1 = 10**

**10 + 19 = 29**

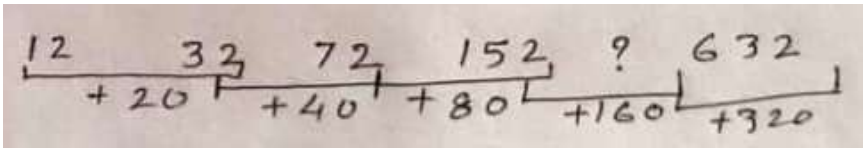
**29 + 48 = 77**

**8.** 12, 32, 72, 152, ?, 632

(1) 312 (2) 515 (3) 613 (4) 815

**Ans.** **(1)**

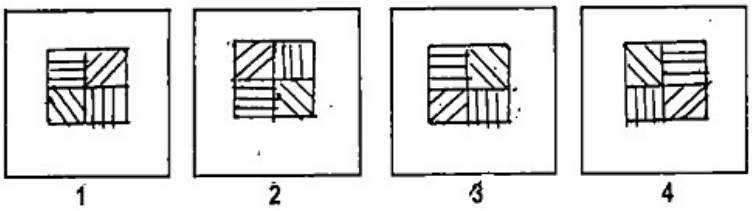
**Sol.**




**So , 152 + 160 = 312**

**Direction : (9 to 11)** Find the odd figure.

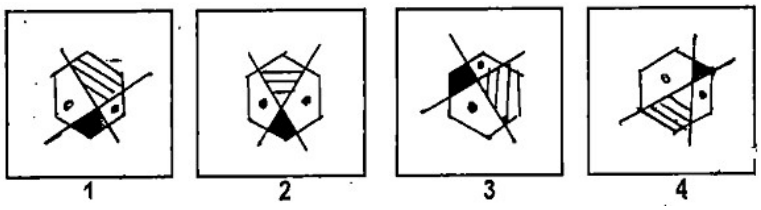
**9.**




**Ans.** **(4)**

**Sol.** **By observation**

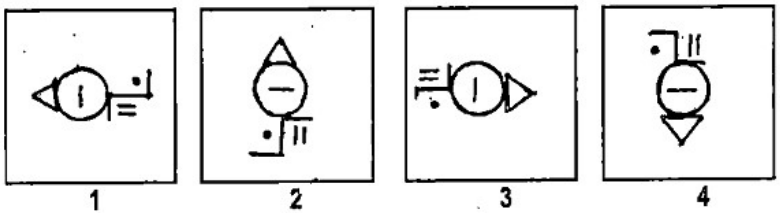
**10.**




**Ans.** **(4)**

**Sol.** **By observation**

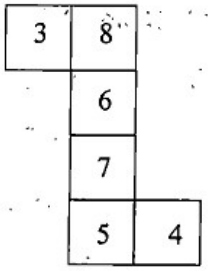
**11.**




**Ans.** **(2)**

**Sol.** **By observation**

**Directions : (12 to 14)** The figure given alongside is folded on the given lines to construct a cube. Observe the figure and answer the following questions by choosing correct alternative.




**12.** From the following which number will be opposite to 8?

(1) 4 (2) 5 (3) 6 (4) 7

**Ans.** **(4)**

**Sol.** **By alternate law**

**13.** From the following which number will not be adjacent to 4?

(1) 3 (2) 8 (3) 6 (4) 7

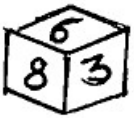
**Ans.** **(1)**

**Sol.** **By alternate law**

**14.** From the following which figure is not obtained by folding the paper to form a cube?

(1) 


(2) 


(3) 


(4) 


**Ans.** **(2)**

**Sol.** **3 and 4 can not be adjacent, Both will be opposite to each other.**

**15.** In the following question there is a specific relationship between the first and second term. The same relationship exists between the third and fourth term. Considering the relationship select correct alternative to replace question mark:

4 : 80 : 21 : ?

(1) 9702 (2) 8702 (3) 8820 (4) 421

**Ans.** **(1)**

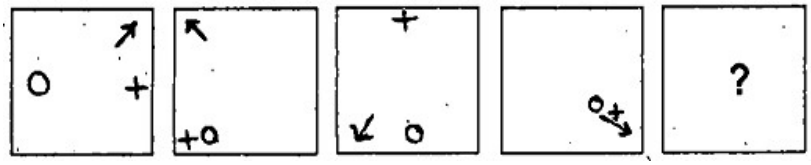
**Sol.** $4^3 + 4^2 = 80$

So $21^3 + 21^2 = 9702$

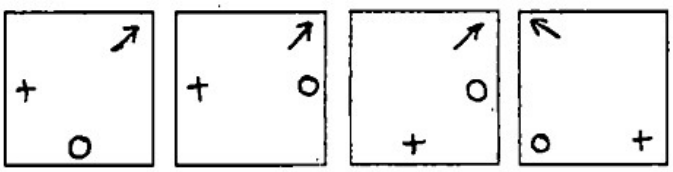
**So option (1)**

**Directions : (16 to 17)** In each of the following, the question figures change in a particular order. Decide which figure from the given alternatives will replace the question mark.

**16.** **Question figures**

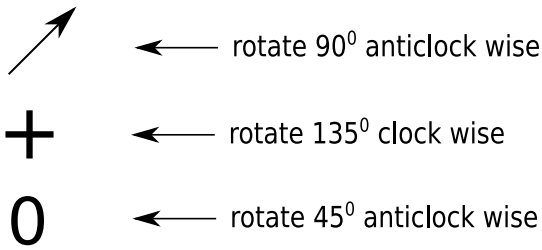



**Answer figures**

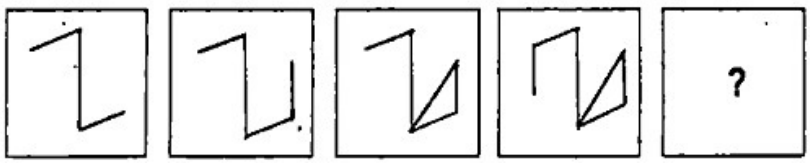



**Ans.** **(2)**

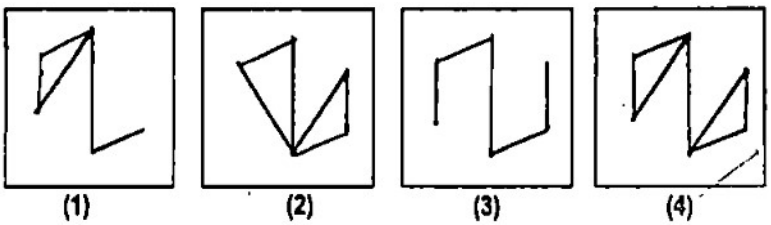
**Sol.**




**17.** **Question figures**



**Answer figures**




**Ans.** **(4)**

**Sol.** **By observation**

**Direction : (18 to 20)** Sushil, Vipin, Prashant, Amar are four class friends. Sushil does not like dance. Vipin likes only music and dance. Only three of them like dance and craft. Prashant likes all subjects except music. Shshil is master in drawing and music.

**Sol.** **Q. 18 to 20**

| | Sushil | Vipin | Prashant | Amar |
|---|---|---|---|---|
| Dance | × | √ | √ | √ |
| Music | √ | √ | × | |
| Craft | √ | × | √ | √ |
| Drawing | √ | × | √ | |

**18.** Amar likes which subjects?

(1) music and craft (2) dance and drawing

(3) dance and craft (4) music and drawing

**Ans.** **(3)**

**19.** Which subject Vipin, Prashant and Amar likes?

(1) drawing (2) music (3) dance (4) craft

**Ans.** **(3)**

**20.** Who likes drawing?

(1) Sushil and Vipin (2) Vipin and Prashant

(3) Sushil and Prashant (4) Prashant and Amar

**Ans.** **(3)**

**21.** How many cubes are there having at least one face painted?

(1) 64 (2) 52 (3) 48 (4) 24

**Ans.** **(2)**

**Sol.** By observation

**22.** If the base layer of the block would be same as the top layer how many cubes will be in the block?

(1) 56 (2) 52 (3) 60 (4) 62

**Ans.** **(1)**

**Sol.** By observation

**23.** If the base layer and top layer of block is same then at the most how many faces of the cube will be painted?

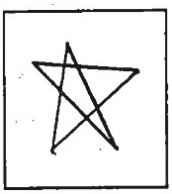
(1) 3 (2) 2 (3) 1 (4) 0

**Ans.** **(4)**

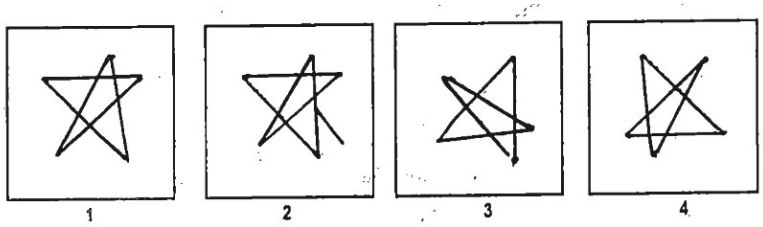
**Sol.** If we remove 4 boxes from base

**Directions : (24 to 25)** Choose the mirror from the alternatives given for the given for the given question figures.

**24.** **Questions figure**



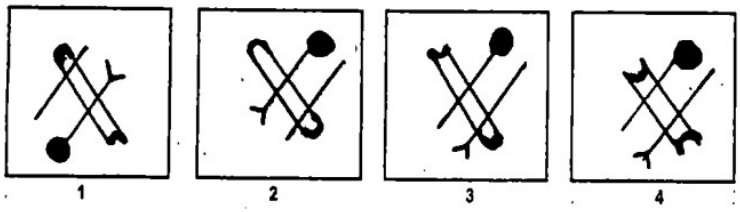
**Answer Figures**




**Ans.** **(1)**

**25.** **Questions Figures**

**Answer Figures**




**Ans.** **(3)**

**Sol.** By observation

**Directions : (26 to 27)** A rhythmic arrangement of letters is given. The missing letters appear in the same order in one of the alternative answers. Find the correct alternative

**26.** p – rsqr – – rs – q – pqr

(1) qrspq (2) qrppr (3) qspps (4) qsqpr

**Ans.** **(3)**

**Sol.** p(q)rs qr(s)(p) rs(p)(q) (s)(p)qr [q s p p s]

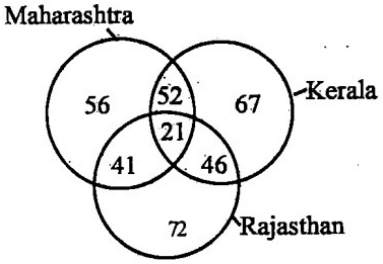
**27.** a – cb – ac – – ab –

(1) bcabb (2) bcaab (3) bacbc (4) bcabc

**Ans.** **(4)**

**Sol.** a_b_c b_c_a c_a_b_ a_b_c_ (b c a b c)

**Directions : (28 to 30)** The numbers in the figure show number of tourists from different states. Observe the figure and choose the answer from given alternatives for following questions.




**28.** How many tourists visited all three states?

(1) 119 (2) 108 (3) 21 (4) 195

**Ans.** **(3)**

**Sol.** By observation

**29.** Find the number of tourists visiting only two states.

(1) 93 (2) 98 (3) 87 (4) 139

**Ans.** **(4)**

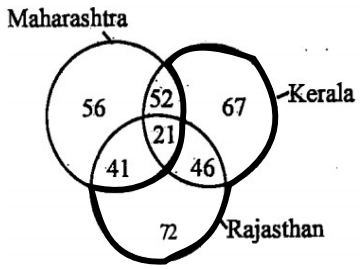
**Sol.** By observation

**30.** Find the number of tourists who visited Kerala and Rajasthan but not visited Maharashtra?

(1) 139 (2) 185 (3) 26 (4) 232

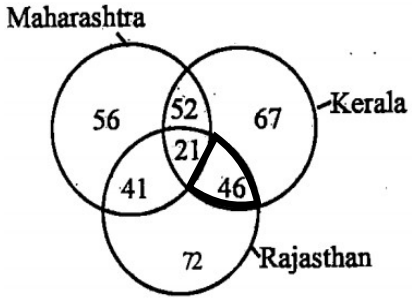
**Ans.** **Explanation of And and Or**

**Sol.**




Highlighted region for Kerala **OR** Rajasthan

67 + 46 + 72 = 185



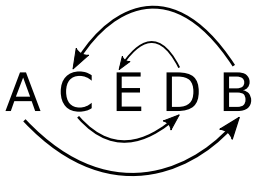

Highlighted region for Kerala **AND** Rajasthan 46

**Direction :** **(31 to 32)** Find the odd term

**31.** (1) ACEDB (2) HJLIK (3) TVXWU (4) PRTSQ

**Ans.** **(2)**

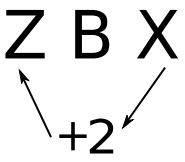
**Sol.**




**32.** (1) ZBX (2) VFT (3) RJO (4) SIQ

**Ans.** **(3)**

**Sol.**




**Direction : (33 to 34)** Which symbols will come in the order. Choose the correct alternative.

**33.** $\sum\theta\Delta\mu\beta$, $\theta\sum\Delta\mu\beta$, $\theta\Delta\mu\beta\sum$, **?**

(1) $\theta\Delta\beta\sum\mu$ (2) $\theta\Delta\mu\beta\sum$ (3) $\theta\Delta\sum\mu\beta$ (4) $\theta\Delta\mu\sum\beta$

**Ans.** **(4)**

**Sol.**

$\sum\theta\Delta\mu B$

$\theta\sum\Delta\mu\beta$

$\theta\Delta\sum\mu\beta$

$\Delta\mu\sum\beta$

**34.** $\psi\Omega\square\bigcirc$ , $\Omega\square\bigcirc\delta$ , $\square\bigcirc\delta\alpha$ , ?

(1) $O\delta\alpha n$ (2) $O\delta\alpha\Omega$ (3) $O\delta\alpha\psi$ (4) $O\delta\alpha\square$

**Ans.** **(1)**

**Sol.** $\underline{\psi\Omega\square O}$

$\downarrow$

$\underline{\Omega\square\bigcirc\delta}$ $\longrightarrow$ new symbol

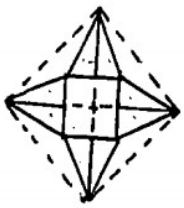
$\downarrow$

$\underline{\square\bigcirc\delta\alpha}$ $\longrightarrow$ new symbol

$\downarrow$

$O\delta\alpha n$ $\longrightarrow$ new symbol

**35.** **Directions:** Find number of triangles in the given figure.

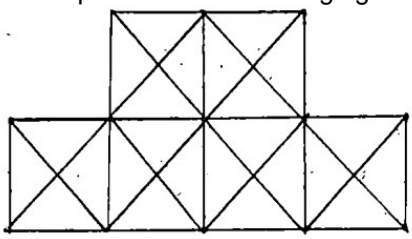


(1) 16 (2) 20 (3) 24 (4) 32

**Ans.** **(3)**

**Sol.** By observation

**36.** **Directions:** Find total number of squares in the following figure.

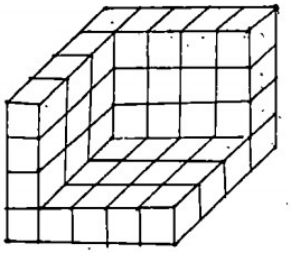


(1) 6 (2) 12 (3) 13 (4) 15

**Ans.**

**Sol.** Counting of squares is 14

**Direction (37-39) :** The following figure is made by arranging some cubes having each side 1 unit. This is painted from all sides. Observe the figure and choose correct alternative for following question.



**37.** Find the number of cubes having maximum number of faces painted
(1) 1 (2) 2 (3) 3 (4) 4

**Ans.** **(3)**

**Sol.** By observation

**38.** How many cubes are used to make the arrangement as shown in the figure?
(1) 35 (2) 40 (3) 44 (4) 46

**Ans.** **(3)**

**Sol.** By observation

**39.** Find the number of cubes having no face painted.

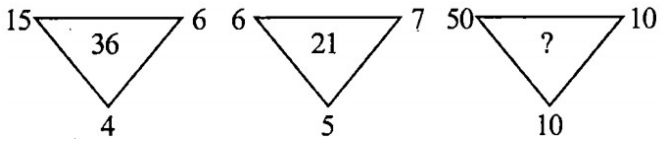
(1) 0 (2) 1 (3) 2 (4) 3

**Ans.** **(1)**

**Sol.** By observation

**Directions (40 – 41) :** In the following figure numbers are written with a specific rule. Find the rule and decide which alternative will be in of question mark.

**40.**



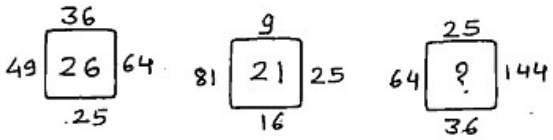

(1) 140 (2) 220 (3) 320 (4) 500

**Ans.** **(4)**

**Sol.** $\frac{15\times4\times6}{10}=36$

$\frac{50\times10\times10}{10}=500$

**41.**




(1) 19 (2) 23 (3) 31 (4) 25

**Ans.** **(3)**

**Sol.** $7^2, 6^2, 5^2, 8^2$

(5 + 6 + 7 + 8) = 26

$5^2, 6^2, 8^2, 12^2$

(5 + 6 + 8 + 12) = 31

**Directions : (42 to 44)** In the following questions there is a specific relation between first and second term. The same relationship exists between third and fourth term, which will replace the question mark. Select the correct alternative from the given alternatives.

**42.** **EJOT : VQLG :: BGLQ : ?**

(1) DINS (2) RMHC

(3) SNID (4) EJOT

**Ans.** **(3)**

**Sol.**


Difference between of all letters is 5.

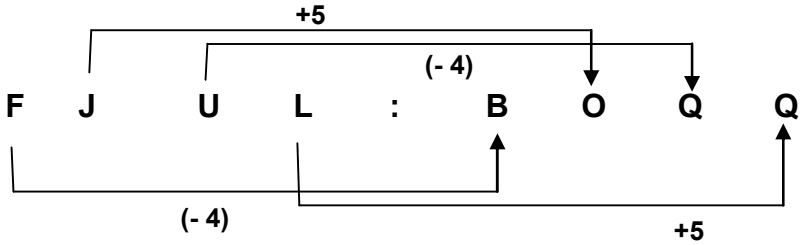
**43.** **FJUL : BOQQ :: LHRX : ?**

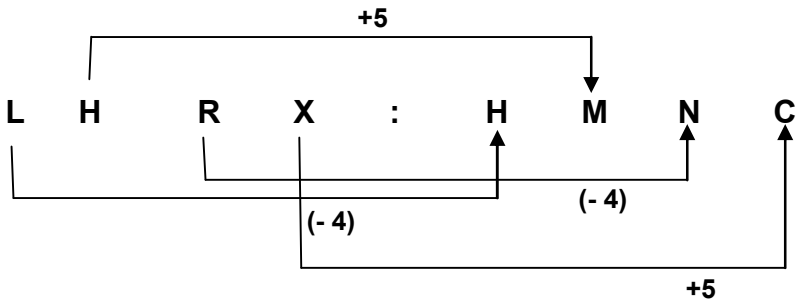
(1) BKPR (2) MNCC

(3) HRYY (4) HMNC

**Ans.** **(4)**

**Sol.**



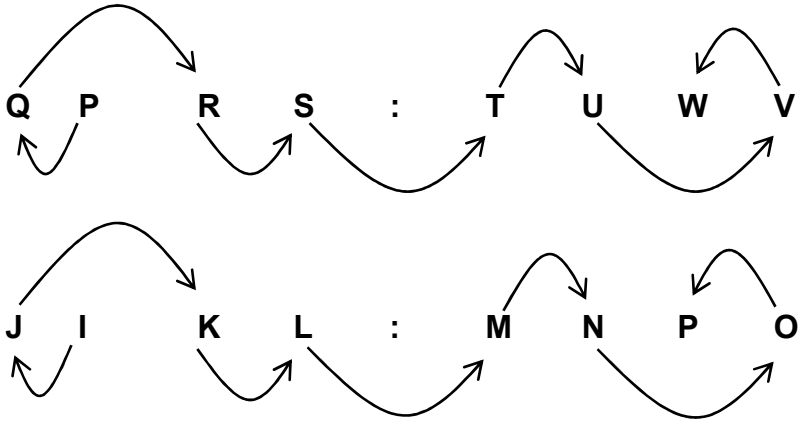

**44.** **QPRS : TUWV :: JIKL : ?**

(1) MNOP (2) NMOP

(3) MNPO (4) NMPO

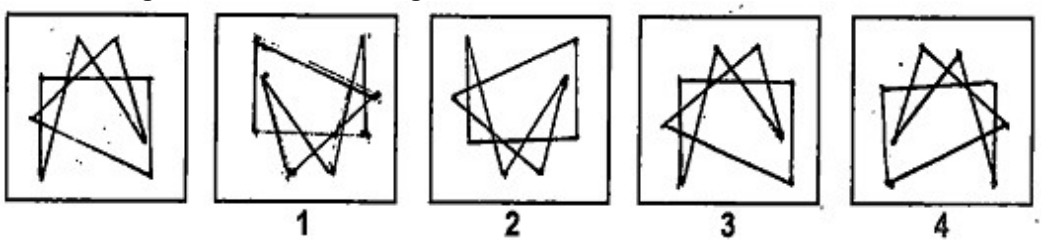
**Ans.** **(3)**

**Sol.**



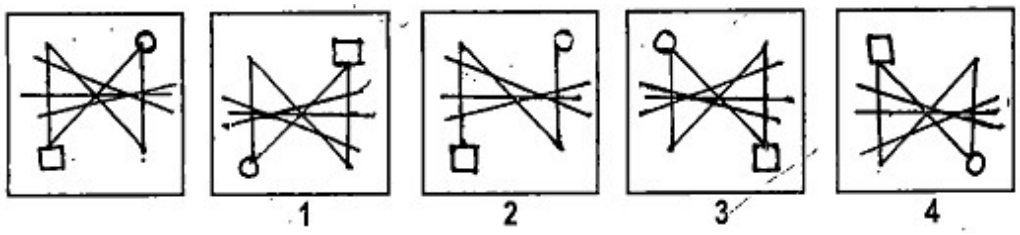

**Directions : (45 to 46)** Choose the mirror image from the alternatives given for the given question figures.

**45.** **Question figure** **Answer figures**




**Ans.** **(4)**

**46.** **Question figure** **Answer figures**




**Ans.** **(3)**

**Directions : (47 to 48)** In a row Pradyuman is twelfth from front and Sarvesh is Twenty fifth from behind. Rahul is exactly at the centre place between Pradyuman and Sarvesh. There are 70 persons in the row then

**47.** Rahul is standing at which place from front?
(1) 29 (2) 33
(3) 17 (4) 42

**Ans.** **(1)**

**Sol.** Sarvesh is at $46^{th}$ position from front.
$\therefore$ Rahul is at $29^{th}$ place.

**48.** Rahul is at which place from behind?
(1) 29 (2) 42
(3) 33 (4) 17

**Ans.** **(2)**

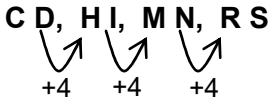
**Sol.** **(**70 – 29) + 1
Rahul's place from behind.

**Directions : (49 to 52)** In each of the following questions write which correct term in sequence replaces the question mark?

**49.** **CD, HI, MN, ?**
(1) QS (2) OP (3) RS (4) PQ

**Ans.** **(3)**

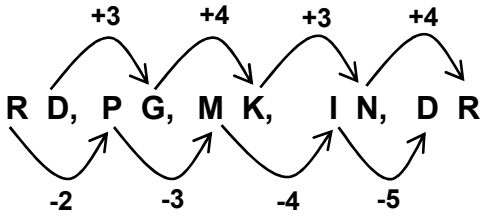
**Sol.**




**50.** **RD, PG, MK, IN, ?**
(1) ER (2) DR (3) CQ (4) DQ

**Ans.** **(2)**

**Sol.**




**51.** **BM26, EN70, HO120, KP176, ?**
(1) NQ250 (2) NP224 (3) MQ221 (4) NQ238

**Ans.** **(4)**

**Sol.** **B M 26** **N Q 238**
**2 X 13 = 26** **14 X 17 = 238**

**52.** T23C, QG24, 26NL, KP27, ?
(1) 29GV (2) 29HU (3) 27GT (4) 28HT

**Ans.** **(2)**

**Sol.** **T 23 C  Q G 24  29 H U**
**20 + 3 = 23  17 + 7 = 24  29 = 8 + 21**

Alphabets are not repeating.
Only option (2) has new alphabets.

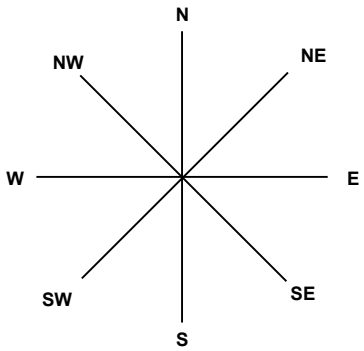
**Directions : (53 to 55) Observe the following pyramid and decide which alternative will be in place of question mark in each of the following questions.**


**53.** oab : zpq :: gab : ?
(1) mde (2) bxy (3) jhi (4) tjk
**Ans.** **(3)**
**Sol.** **By observation.**

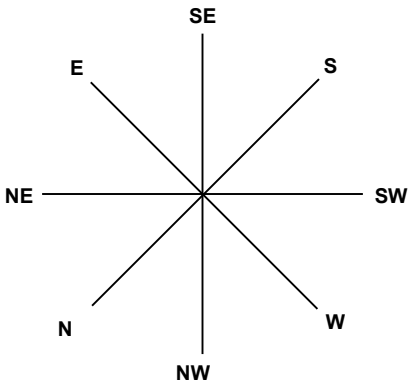
**54.** pqcb : utfg :: yzqr : ?
(1) abcd (2) lscb (3) ekig (4) wvts
**Ans.** **(4)**
**Sol.** **By observation.**

**55.** opnqm : ijtk :: ? : gjfke
(1) bncmd (2) gbfce (3) jfxle (4) ybxsr
**Ans.** **(1)**
**Sol.** **By observation.**

**56.** A map was so placed that north-west becomes south then what will east become?
(1) South-west (2) North (3) North-east (4) West
**Ans.** **(1)**
**Sol.**

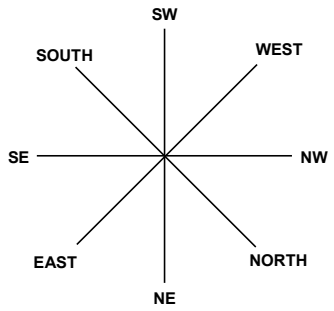



**Original direction**

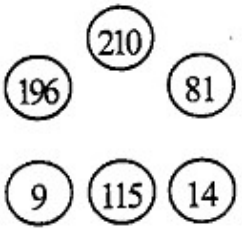



**Answer Figure**

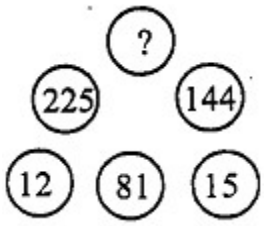
**57.** A map was so placed that south-east becomes west then what will north-east becomes?
(1) South-west (2) West (3) North-west (4) South
**Ans.** **(4)**
**Sol.**




**Directions : (58 to 60)** There is a certain relationship between the numbers that are given in the following figure. According to that relationship which alternative will replace the question mark?



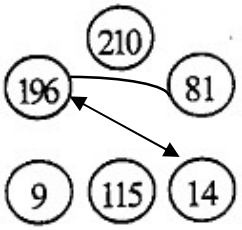

**58.**



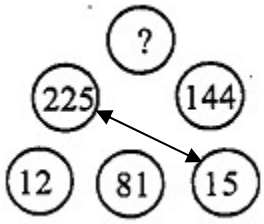

(1) 75 (2) 240
(3) 360 (4) 400

**Ans.** **(2)**

**Sol.**

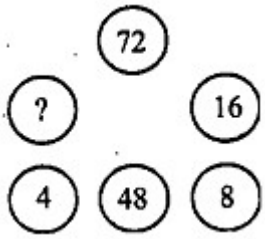



196 + 14 = 210 196 – 81 = 115




225 + 15 = 240

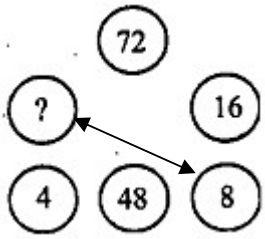
**59.**



(1) 32 (2) 40
(3) 64 (4) 80

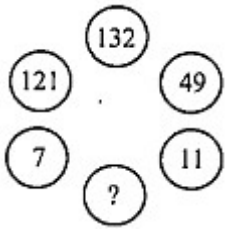
**Ans.** **(3)**

**Sol.**




$8^2 = 64$

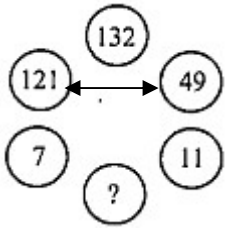
**60.**




(1) 114 (2) 83
(3) 72 (4) 60

**Ans.** **(3)**

**Sol.**



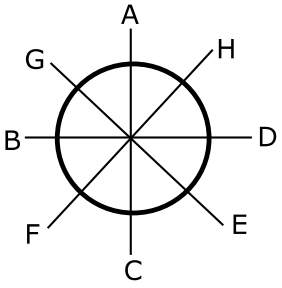

121 – 49 = 72

**Directions : (61 to 63)** A, B, C, D, E, F, G, H eight friends are sitting around the circular table. C is sitting in front of A and H is sitting at the first position to the left of A. F is in front of H. Whereas D is at the first position to right of E and C is at the first position to left of E. A is between G and H. Choose the correct alternatives for the questions given below.

**61.** Who is sitting between B and C ?
(1) D (2) G (3) F (4) H

**Ans.** **(3)**

**Sol.**

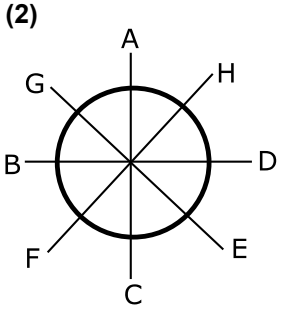



**62.** Who is sitting between A and B?

(1) D (2) G (3) E (4) F

**Ans.** **(2)**

**Sol.**

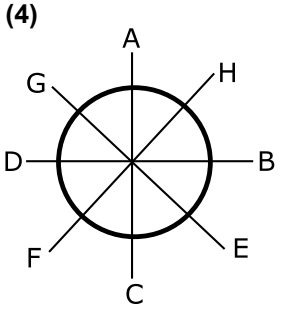



**63.** If B and D would have interchanged the places then who will be sitting at the first position to the left of B?

(1) G (2) C (3) F (4) E

**Ans.** **(4)**

**Sol.**




**64.** If according to mathematical code language 8 ÷ 2 = 70, 9 ÷ 3 = 87, 10 ÷ 4 = 106 then 7 ÷ 5 = ?

(1) 65 (2) 58 (3) 51 (4) 63

**Ans.** **(3)**

**Sol.**

| | | | |
|---|---|---|---|
| 8 ÷ 2 = 70 | 9 ÷ 3 = 87 | 10 ÷ 4 = 106 | 7 ÷ 5 = ? |
| $8^2 + (8 - 2) = 70$ | $9^2 + (9 - 3) = 87$ | $10^2 + (10 - 4) = 106$ | $7^2 + (7 - 5) = 51$ |

**65.** If according to mathematical code 9 + 2 = 36, 8 + 3 = 72, 7 + 4 = 112 then 6 + 5 = ?

(1) 84 (2) 130 (3) 75 (4) 150

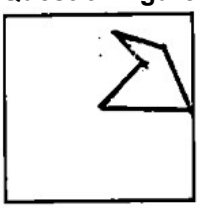
**Ans.** **(4)**

**Sol.**

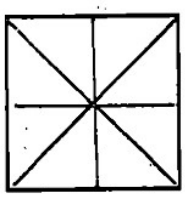
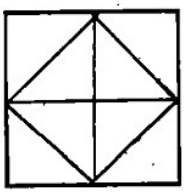
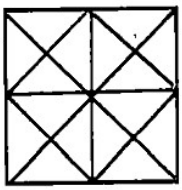
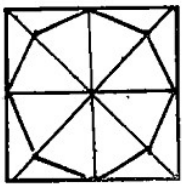
| | | | |
|---|---|---|---|
| 9 + 2 = 36 | 8 + 3 = 72 | 7 + 4 = 112 | 6 + 5 = ? |
| $9 \times 2^2 = 36$ | $8 \times 3^2 = 72$ | $7 \times 4^2 = 112$ | $6 \times 5^2 = 150$ |

**Directions : (66 and 67)** A square shaped paper is folded as shown in the figure. The paper when unfolded will look like as shown in one of the alternatives. Select the correct alternative.

**66.** **Question figure :**



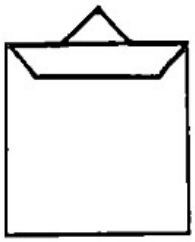
**Answer figure :**

(1)  (2)  (3)  (4) 

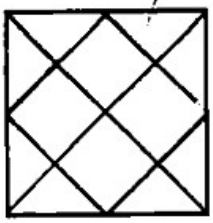
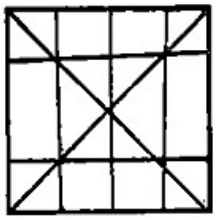
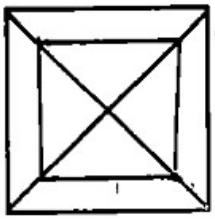
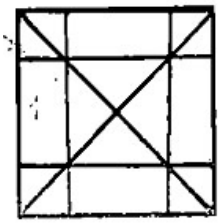
**Ans.** **(4)**

**Sol.** **By observation**

**67.** **Question figure :**



**Answer figure :**

(1)  (2)  (3)  (4) 

**Ans.** **(3)**

**Sol.** **By observation**

**68.** Ten years before ratio of ages of Ram and Shyam was 1 : 7, ten years after ratio their ages is 1 : 3. Find present age of Ram.

(1) 10 years (2) 20 years (3) 30 years (4) 70 years

**Ans.** **(2)**

**Sol.** Let present ages of Ram and Shyam be x and y

$\frac{x-10}{y-10}=\frac{1}{7}$ and $\frac{x+10}{y+10}=\frac{1}{3}$

$7x - 70 = y - 10$ $3x + 30 = y + 10$

$7x - y = 60$___(1) $3x - y = -20$_____(2)

Solve the equations

$x = 20$ $y = 80$

**69.** From the above information what will be the age of Shyam after 10 years?

(1) 70 years (2) 80 years (3) 90 years (4) 30 years

**Ans.** **(3)**

**Sol.** Let present ages of Ram and Shyam be x and y

$\frac{x-10}{y-10}=\frac{1}{7}$ and $\frac{x+10}{y+10}=\frac{1}{3}$

$7x - 70 = y - 10$ $3x + 30 = y + 10$

$7x - y = 60$___(1) $3x - y = -20$_____(2)

Solve the equations

$X = 20$ $y = 80$

$80 + 10 = 90$ years

**Directions : (70 and 71)** In the following questions the numbers outside the bracket are related to number inside the bracket in a specific manner. From the given alternatives find the right number which matches and will replace the question mark.

**70.** 78 (20) 82
37 (12) 59
45 (?) 91
(1) 13 (2) 17 (3) 19 (4) 23

**Ans.** **(2)**

**Sol.** $78+82=160 \Rightarrow \frac{160}{8}=20$

$37+59=96 \Rightarrow \frac{96}{8}=12$

$45+91=36 \Rightarrow \frac{136}{8}=17$

**71.** 95 (53) 87
152 (82) 58
76 (?) 174
(1) 46 (2) 93 (3) 89 (4) 78

**Ans.** **(1)**

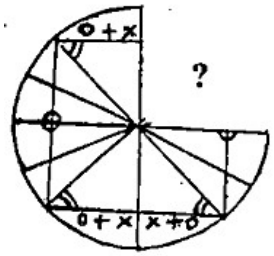
**Sol.** 19 × **5** ⟶ 29× **3** So ans. is **53**

19 × **8** ⟶ 29× **2** So ans. is **82**

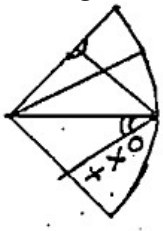
19 × **4** ⟶ 29× **6** So ans. is **46**

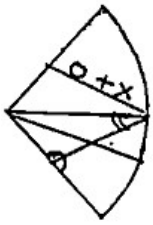
**Directions : (72 and 73)** Select the correct alternatives which can complete the figures.

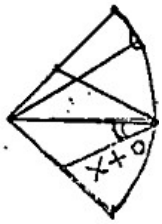
**72.** **Questions figure :**

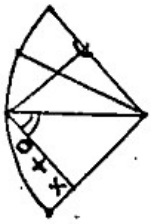



**Answer figure :**

(1) 

(2) 

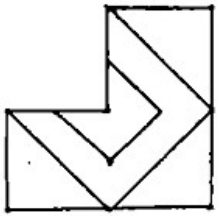
(3) 

(4) 

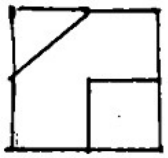
**Ans.** **(4)**

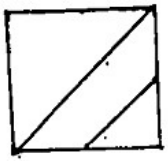
**Sol.** **By observation**

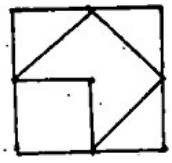
**73.** **Questions figure :**

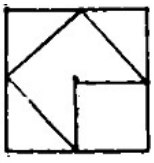


**Answer figure :**

(1) 

(2) 

(3) 

(4) 

**Ans.** **(2)**

**Sol.** **By observation**

**Directions : (74 to 76)** In the following questions specific group of letters are given. From the given alternatives, find out the right letters which matches the given group.

**74.** GECA, ZXVT, SQOM

(1) YWUT (2) VTRO (3) MKIH (4) LJHF

**Ans.** **(4)**

**Sol.** **Difference of successive letter is – 1**

**75.** BEIN, EHLQ, ILPU

(1) NQUZ (2) HKOS (3) LOSY (4) JMQT

**Ans.** **(1)**

**Sol.**

G E I N
2 5 9 14
3 4 5

E H L Q
5 8 12 17
3 4 5

I L P U
9 12 16 21
3 4 5

N Q U Z
14 17 21 26
3 4 5

**76.** BYEV, DWHS, IRLO

(1) FUKO (2) CXJP (3) GTDW (4) AZCW

**Ans.** **(3)**

**Sol.**

B Y E V
27 27

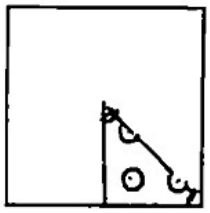
D W H S
4 23 8 19
27 27

I R L O
9 18 12 15
27 27

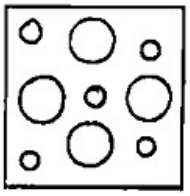
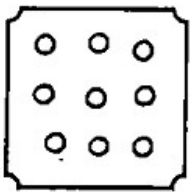
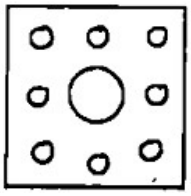
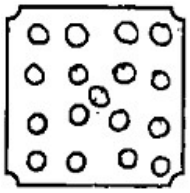
G T D W
7 20 4 23
27 27

**Directions : (77 and 78)** A square piece of paper is folded and cut at specific spots as shown in the figures. The paper when unfolded will look-like as shown in one of the alternatives. Select the correct alternative.

**77.** **Question figure:**



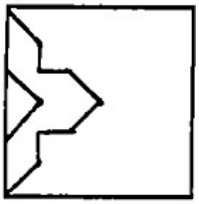
**Answer figure:**

(1)  (2)  (3)  (4) 

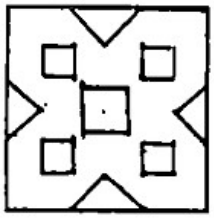
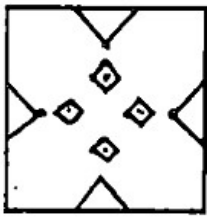
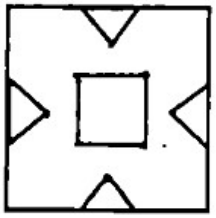
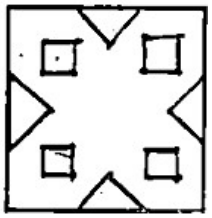
**Ans.** **(4)**

**Sol.** **By observation**

**78.** **Question figure:**



**Answer figure:**

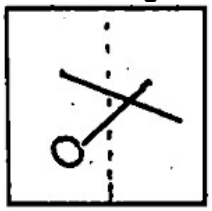
(1)  (2)  (3)  (4) 

**Ans.** **(4)**

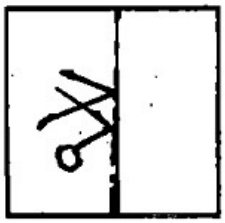
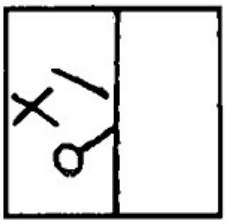
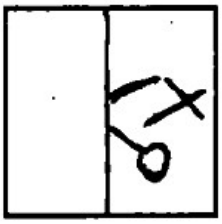
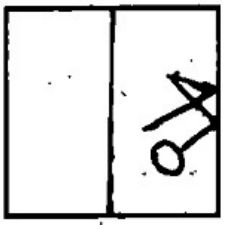
**Sol.** **By observation**

**Directions : (79 and 80)** In the figure given below a transparent square shaped paper is folded along the dotted lines, which figure will be obtained? Find the figure from the alternative figures given.

**79.** **Question figure :**



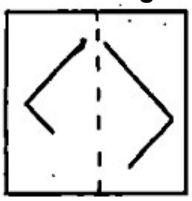
**Answer figure:**

(1)  (2)  (3)  (4) 

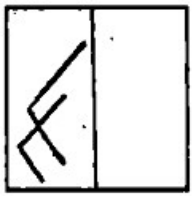
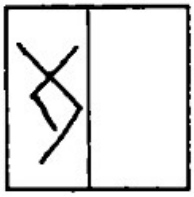
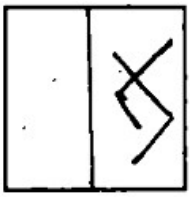
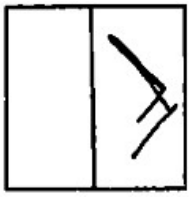
**Ans.** **(4)**

**Sol.** **By observation**

**80.** **Question figure :**



**Answer figure:**

(1)  (2)  (3)  (4) 

**Ans.** **(1)**

**Sol.** **By observation**

**Directions: (81 to 83)** In a certain code language the word BASIC has been written in four different code languages. Understanding the code, find out the correct code language for the word given in each of the following questions.

| **Word** | | **Code language** |
|---|---|---|
| BASIC | = | (1) EDVLF $\Rightarrow (B+3=E,\ A+3=D,\ S+3=V,\ I+3=L,\ C+3=F)$ |
| | | (2) CISAB $\Rightarrow$ Reverse alphabets of BASIC |
| | | (3) YASIZ $\Rightarrow$ BASIC $\Rightarrow (B-3=Y,\ ASI=$ As it is, $C-3=Z)$ |
| | | (4) BZRHC $\Rightarrow$ BZRHC $\Rightarrow (B=$ As it is, $A-1=Z,\ S-1=R,\ I-1=H,\ C=$ As it is$)$ |

**81.** EARTH = BARTE

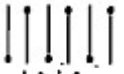
**Ans.** **(3)**

**Sol.** By Observation

**82.** CLOUD = CKNTD
**Ans.** **(4)**
**Sol.** By Observation

**83.** LEARN = OHDUQ
**Ans.** **(1)**
**Sol.** By Observation

**84.** In a certain code language if
@ × ✡ = 45, ◡ × ⚐ = 48,
⚐ × ✡ = 40 and # × @ = 27 then find the value of # ?
(1) 5 (2) 6 (3) 3 (4) 9
**Ans.** **(3)**
**Sol.** @ = 9 ◡ = 6
✡ = 5 ⚐ = 48
**Ans: # = 3**

**85.** In a certain code language if  means 4,  means 12, @ means ×, ⊙ means ÷,
# means + and $ means – is used, then find 
(1) 104 (2) 106 (3) 102 (4) 30
**Ans.** **(2)**
**Sol.**  = 4
 = 4 × 3 = 12
@ = × # = +
⊙ = ÷ $ = –
$8 \times 12 - 8 \div 4 + 12$
$= 8 \times 12 - 2 + 12$
$= 96 + 12 - 2$
$= 96 + 10$
$= 106$

**Directions: (86 to 88)** In the following questions specific group of numbers are given. From the given alternatives, find out the right number which matches the given group.

**86.** 416 749 525
(1) 982 (2) 864 (3) 637 (4) 319
**Ans.** **(2)**
**Sol.**
$4\ 4^2 = 416$
$7\ 7^2 = 749$
$5\ 5^2 = 525$
$8\ 8^2 = 864$

**87.** 294 648 448
(1) 84 (2) 94 (3) 100 (4) 319
**Ans.** **(3)**
**Sol.** $9^3 - 9^2 = 729 - 81 = 648$
$7^3 - 7^2 = 343 - 49 = 294$

$8^3 - 8^2 = 512 - 64 = 448$

$5^3 - 5^2 = 100$

**88.** $3\frac{1}{3}$ 3.2 3.25 $3\frac{2}{3}$

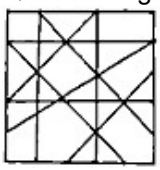
(1) 3.5 (2) 5 (3) 4.2 (4) $\frac{13}{3}$

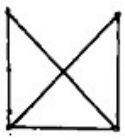
**Ans.**

**Sol.**

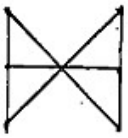
**Directions: (89 to 90)** In the given questions a complex figure is given. Find out which of the simple figures given in the alternatives is hidden in the complex figure.

**89.** Question Figure Answer Figure

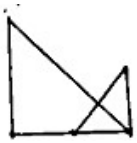




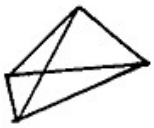
(1)



(2)

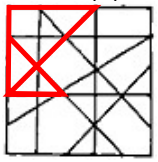


(3)



(4)

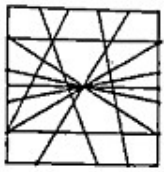
**Answer Figure:**



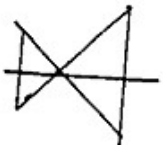
**Ans.** **(3)**

**Sol.** By Observation

**90.** Question figure Answer figure



(1)

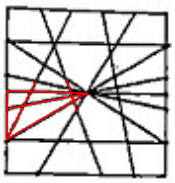


(2)

(3)

(4)

**Answer Figure:**



**Ans.** **(1)**

**Sol.** By Observation

**91.** In the following question letters and numbers are written with a specific rule in horizontal rows. Find the rule and decide which will be in place of question mark.

| | | | |
|---|---|---|---|
| JN | 28 | 27 | GP |
| CE | 12 | 45 | TU |
| LR | ? | ? | MS |

(1) 30, 41 (2) 30, 32 (3) 34, 36 (4) 35, 35

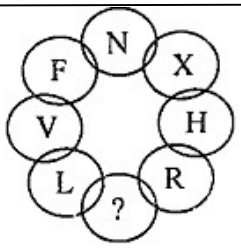
**Ans.** **(3)**

**Sol.** $JN \equiv 10 + 14 = 24 + 4 = 28$ $LR \equiv 12 + 18 = 30 + 4 = 34$

$GP \equiv 7 + 16 = 23 + 4 = 23$ $MS \equiv 13 + 19 = 32 + 4 = 36$

Sum of place value of alphabets + 4 = Answer

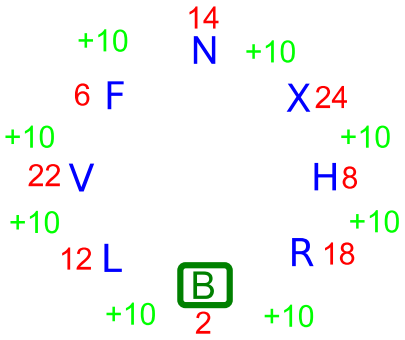
**92.** Write the correct alternative to replace question mark.




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

**Ans.** **(2)**

**Sol.**




**Directions: (93 and 94)** In the following table the digits are assigned with certain symbols. Observe them carefully and choose the correct alternative to answer the questions.

| Digits | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Symbols | ⊕ | 卐 | + | ◡· | ▽ | # | ⊗ | ◡· | △ | $ |

**93.** How will you write the number 635104?

(1) ⊕▽⊕◡·#卐 (2) ⊗◡·#卐⊕▽

(3) ⊕◡·△#卐⊗ (4) ⊗△◡#卐⊕

**Ans.** **(2)**

**Sol.** By Observation

**94.** Which number will be expressed by $ # 卐 △ ◡· ▽

(1) 951478 (2) 958174 (3) 951847 (4) 951874

**Ans.** **(4)**

**Sol.** By Observation

**Directions : (95 and 96)** In the following questions word letters are given in column I and are coded in column II. But they are not arranged according to the order of word letters in column I. Find the code language choose the correct alternative to answer the question.

| Column I | Column II |
|---|---|
| TEAR | 8623 |
| PURN | 5641 |
| TALK | 9872 |
| NET | 235 |

**95.** What is the code for the word PREAK?

(1) 13689 (2) 16389 (3) 16839 (4) 16489

**Ans.** **(2)**

**Sol.** **T = 2**

**P = 1**

**R = 6**
**E = 3**
**A = 8**
**N = 5**
**U = 4**
**L = 7**
**K =9**

**96.** 542687 code is for which word?
(1) NATURE (2) NATEUR (3) NUTRAL (4) NURTAL

**Ans.** **(3)**

**Sol.** **T = 2**
**P = 1**
**R = 6**
**E = 3**
**A = 8**
**N = 5**
**U = 4**
**L = 7**
**K =9**

**97.** Observe the following code language and choose the correct alternative to answer the questions.

| Letters | Z | A | W | O | D | I | Y | L | P | C |
|---|---|---|---|---|---|---|---|---|---|---|
| Digits | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

What is the code for the word ZODIAC?
(1) 034159 (2) 034519 (3) 043951 (4) 093415

**Ans.** **(2)**

**Sol.** By Observation

**Directions: (98 to 100)** Observe the pyramid of number and choose the correct alternative which will replace question mark.

1

2 3 4

5 6 7 8 9

10 11 12 13 14 15 16

17 18 19 20 21 22 23 24 25

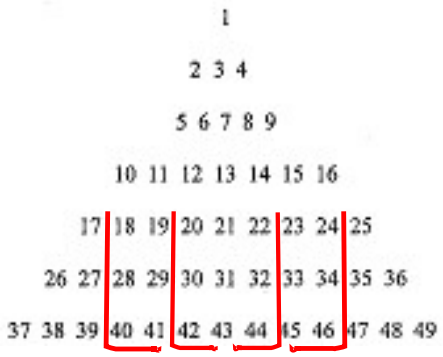
26 27 28 29 30 31 32 33 34 35 36

37 38 39 40 41 42 43 44 45 46 47 48 49

**98.** 18284041 : 24344645 : : 20304243 : ?
(1) 22324443 (2) 21314344 (3) 22314445 (4) 24344647

**Ans.** **(1)**

**Sol.** By Observation

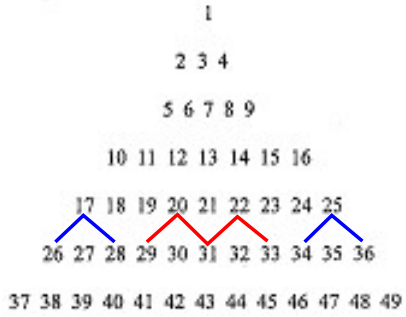


**99.** 261728 : ? : : 292031 : 332231

(1) 281930 (2) 302132 (3) 362534 (4) 352433

**Ans.** **(3)**

**Sol.** By Observation




**100.** 37261718 : 49362524 : : 39271710 : ?

(1) 39281920 (2) 47352516 (3) 47342322 (4) 46342416

**Ans.** **(2)**

**Sol.** By Observation