

ANSWER KEY and Solutions - Clear SSC MTS REASONING! Predicted Question Bank in PDF

Answer Key:

Qu. No.	1	2	3	4	5	6	7	8	9	10
Ans.	c	c	a	d	c	c	b	c	d	c
Qu. No.	11	12	13	14	15	16	17	18	19	20
Ans.	b	b	d	b	b	b	a	a	c	a
Qu. No.	21	22	23	24	25	26	27	28	29	30
Ans.	a	a	b	a	d	d	a	c	d	c
Qu. No.	31	32	33	34	35	36	37	38	39	40
Ans.	a	c	a	b	c	b	b	c	b	b
Qu. No.	41	42	43	44	45	46	47	48	49	50
Ans.	c	a	b	b	d	c	d	c	b	a
Qu. No.	51	52	53	54	55	56	57	58	59	
Ans.	c	a	c	b	d	b	d	a		

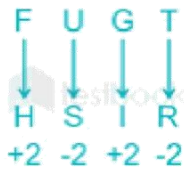
Solutions:

- The logic is as follows,
 $x^3 : (x + 1)^3 + 1$
 $2^3 : ((2 + 1)^3 + 1) = 8 :$
 28 Similarly,
 $3^3 : ((3 + 1)^3 + 1) = 27 : 65$ Clearly,
 the missing number is 65.

- The pattern is as follows,

B	Y	C	X
↓	↓	↓	↓
D	W	E	V
+2	-2	+2	-2

Similarly,



Clearly, HSIR is the required term.

3. Here, it follows the pattern of multiplying a number with 9, 7, 5. In set (63, 49, 35) $\Rightarrow (7 \times 9 = 63, 7 \times 7 = 49, 7 \times 5 = 35)$
In set (81, 63, 45) $\Rightarrow (9 \times 9, 9 \times 7, 9 \times 5)$
Hence answer is set (81, 63, 45).

4. Affluent is a synonym for Opulent. Similarly,
Flourish is a synonym for Prosper.
Thus, flourish is related to prosper.

5. Position of elements in alphabetical series is as follows:-
J = 10 : Q = 10 (in reverse alphabetical order)
L = 12 : O = 12 (in reverse alphabetical order)
H = 8 : S = 8 (in reverse alphabetical order)
Using similar logic,
F = 6 : U = 6 (in reverse alphabetical order)
H = 8 : S = 8 (in reverse alphabetical order)
F = 6 : U = 6 (in reverse alphabetical order)
D = 4 : W = 4 (in reverse alphabetical order) Hence FHFD is related to USUW.

6. The figures can be **classified into 3 classes: U's, Letters, and Geometric Shapes** U's are represented by nos. 1, 7, 9
Letters are represented by nos. 3, 5, 8
Shapes are represented by nos. 2, 4, 6
Thus the three groups are, 358, 246, 179.

7. The pattern here is,
 $247 = 19 \times 13$
 $306 = 17 \times 18$
 $304 = 19 \times 16$
 $285 = 19 \times 15$

All are divisible by 19 except 306.

8. Obeisance means paying respect, whereas all the rest hindrance, obstacle and impediment are synonym and means obstruction.
Thus odd word is obeisance.
9. Only in STUV all letters are in alphabetical order whereas in other options one letter is missed in between.
Hence STUV is the odd one.

10. The pattern is as follows,

$J \xrightarrow{+1} K \xrightarrow{+3} N \xrightarrow{+5} S$
 $M \xrightarrow{+1} N \xrightarrow{+3} Q \xrightarrow{+5} V$
 $C \xrightarrow{+1} D \xrightarrow{+4} H \xrightarrow{+5} M$
 $O \xrightarrow{+1} P \xrightarrow{+3} S \xrightarrow{+5} X$

Thus the odd one is CDHM.

11. The relation between the numbers is as follows,

1) $34 - 43 \Rightarrow |34 - 43| = 9$
 2) $55 - 62 \Rightarrow |55 - 62| = 7$
 3) $62 - 71 \Rightarrow |62 - 71| = 9$
 4) $83 - 92 \Rightarrow |83 - 92| = 9$

All pairs have difference of 9 except $55 - 62$ which has difference of 7, thus the odd one.

12. The particular rule is followed only in ACFJOU as shown below:

$ACFJOU \rightarrow A + 2 = C; C + 3 = F; F + 4 = J; J + 5 = O; O + 6 = U$

But in all other options, no specific pattern is followed as shown below:

$ABFGJK \rightarrow A + 1 = B; B + 4 = F; F + 1 = G; G + 3 = J; J + 1 = K$

$MPQSTV \rightarrow M + 3 = P; P + 1 = Q; Q + 2 = S; S + 1 = T; T + 2 = V$

$ADFHJL \rightarrow A + 3 = D; D + 2 = F; F + 2 = H; H + 2 = J; J + 2 = L$

Thus, ACFJOU is the answer.

13. Here, it follows a pattern of adding the position number for each alphabet as,

A = 1, B = 2, ..., Z = 26 and then subtract the number of characters from the total number.

$HOTEL = 8 + 15 + 20 + 5 + 12 - 5$ (Number of letters in the word) = 55

Therefore, BORE = $2 + 15 + 18 + 5 - 4$ (Number of letters in the word) = 36

14. From the given conditions we understand that the following operators are to be replaced by corresponding operators to get required answer.

'-' \rightarrow 'x'

'÷' \rightarrow '+'

'x' \rightarrow '-'

'+' \rightarrow '÷'

The given equation is: $100 - 10 \times 1000 \div 1000 + 100 \times 10$

Thus after changing the operators we form the equation as:

$$100 \times 10 - 1000 + 1000 \div 100 - 10$$

Solving by BODMAS, we get,

$$1000 - 1000 + 10 - 10 = 0$$

15. Here consonants gets replacing by +5 letters and vowels gets replacing by -3 letters.



Similarly,

$$S \xrightarrow{+5} X$$

$$T \xrightarrow{+5} Y$$

$$U \xrightarrow{-3} R$$

$$D \xrightarrow{+5} I$$

$$E \xrightarrow{-3} B$$

$$N \xrightarrow{+5} S$$

$$T \xrightarrow{+5} Y$$

Hence STUDENT is coded as XYRIBSY.

16. According to the given information,

Letters	M	E	R	C	U	R	Y	Code	F	G	A	E
	C	A	B									

Thus RECUR should change as follows:

Letters

Code	A	G	E	C	A		

R E C U R

Hence RECUR is coded as AGECA.

17. The alphabets are numbered according to their alphabetical order.

In CAT, C is the 3rd letter, A is the 1st letter and T is the 20th letter. Hence it forms 3120. Similarly, NAVIN is coded as:

N is the 14th letter, A is the 1st letter, V is the 22nd alphabet and I is the 9th letter. Therefore, NAVIN becomes 14122914.

18.

ish lto (inm) - (neat) and tidy
 qpr (inm) (sen) - small but (neat)
 hsm (sen) rso - good but erratic

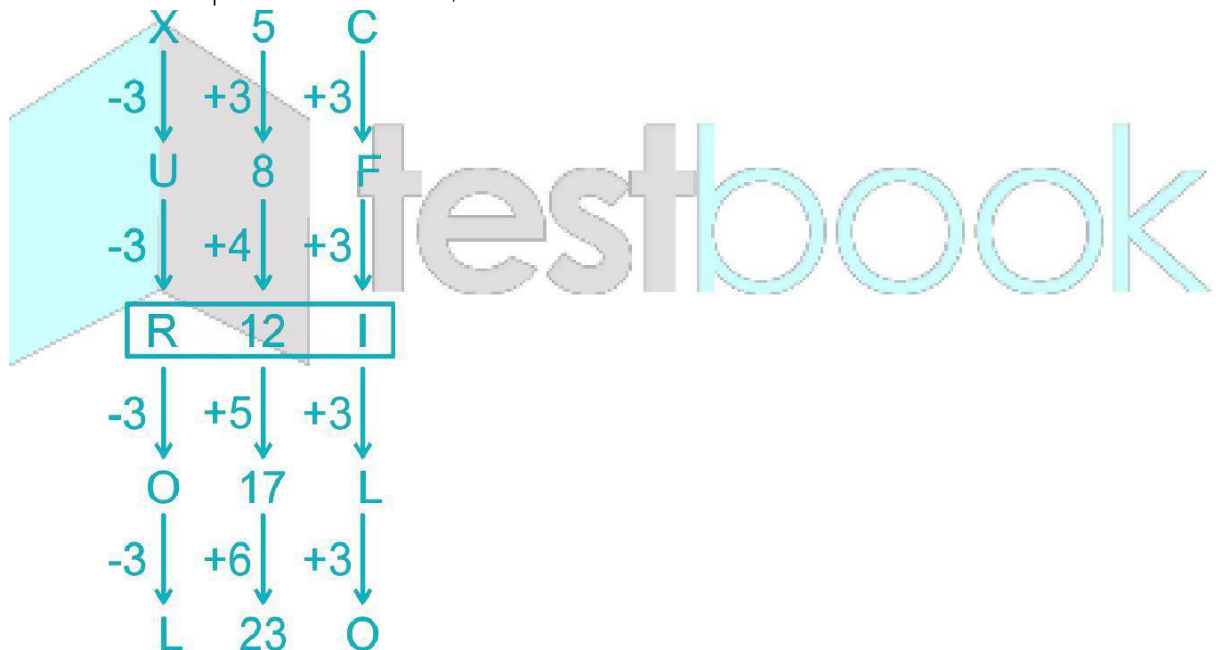
Clearly, 'sen' stands for 'but'.

19. Let's check each option,

- 1) $abcb \rightarrow abcccaabcbbaabccba \rightarrow$ no pattern is formed.
- 2) $abac \rightarrow abccbaabcbbaabccba \rightarrow$ no pattern is formed.
- 3) $abcc \rightarrow abccbaabccbaabccba \rightarrow$ pattern is formed as $abc/cba/abc/cba/abc/cba$.
- 4) $acac \rightarrow abcccaabcbbaabccba \rightarrow$ no pattern is formed.

Thus answer is abcc.

20. Here the pattern is as follows,



Therefore, R12I is the answer.

21. The pattern is alternative,

$$\begin{aligned}
 7 \times 4 - 11 &= 28 - 11 = 17 \\
 17 \times 3 - 11 &= 51 - 11 = 40 \\
 40 \times 4 - 11 &= 160 - 11 = 149 \\
 149 \times 3 - 11 &= 447 - 11 = 436
 \end{aligned}$$

Hence missing number in the series is 149.

22. Instead of 422, it should be 420.

So,

$$462 - 420 = 42$$

$$420 - 380 = 40$$

$$380 - 342 = 38$$

$$342 - 306 = 36$$

Hence 422 is the wrong number.

23. The pattern is as follows, $2 \times 4 - 1 = 7$

$$7 \times 4 - 1 = 27$$

$$27 \times 4 - 1 = 107$$

$$107 \times 4 - 1 = 427$$

$$427 \times 4 - 1 = 1707$$

Hence the next number is 1707.

24. Maternal uncle's Son's grandfather- Father of Maternal uncle

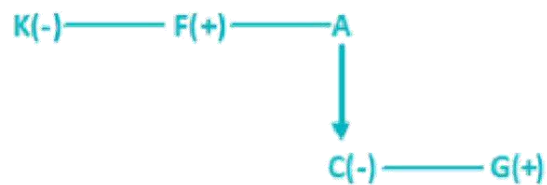


Father of Maternal uncle of daughter will be Father in law to Rajat.

Hence, Rajat will be that man's son-in-law.

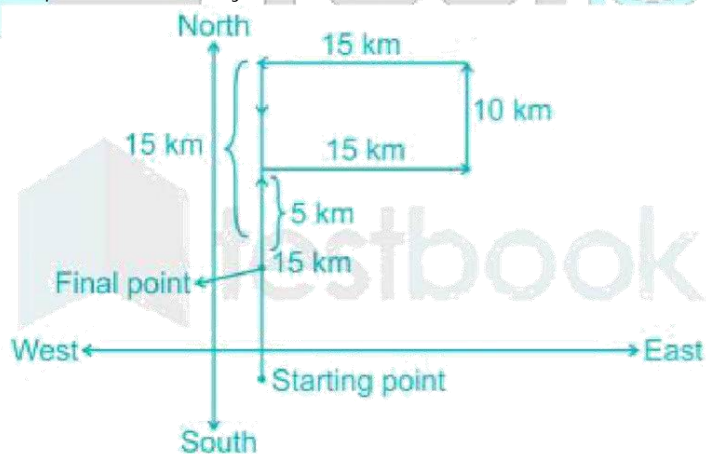
25.

↑	Father/Mother
↓	Son/Daughter
↕	Grandfather/Grandmother
↕	Grandson/Granddaughter
↔	Husband/Wife
—	Brother/Sister
+/-	Male/Female

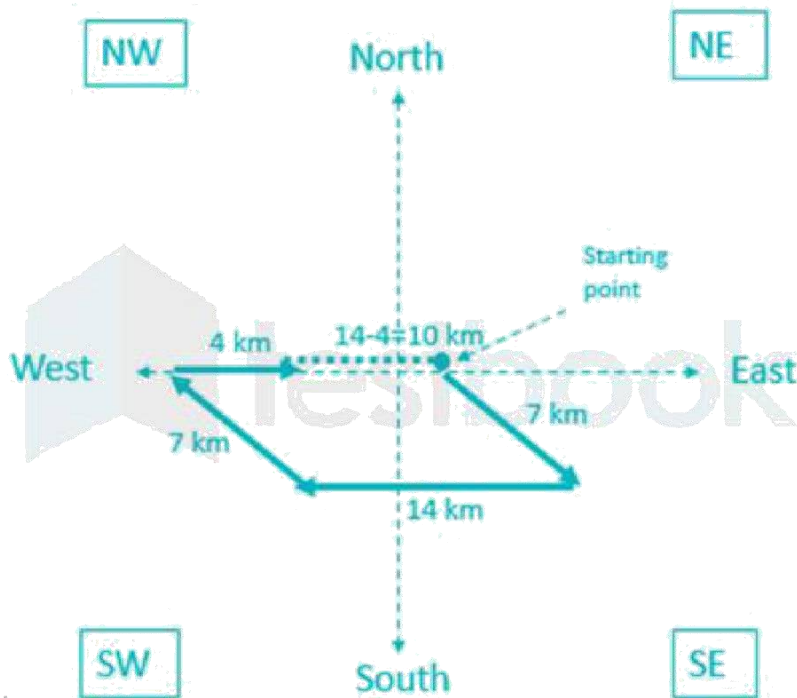


Clearly, F is the uncle of G.

26. The path followed by Jaffar is traced as followed,



Hence from the figure the distance will be $15 - 5 = 10$ km



27. She is clearly 10 km from starting point now.

28. The correct sequence is:

Day → Work → Exhaust → Night → Sleep

As when day starts one do work for the whole day and due to work one get exhausted then after day night comes and one go to sleep to get relief from exhaust situation.

Thus 3, 5, 1, 2, 4 is the answer.

29. The arrangement is as follows:

Invariable → Inventory → Investigate → Invisible → Involuntary

Thus, 4, 1, 5, 3, 2 is the answer.

30. I. *The crop condition was not critical before the rains.* ⇒ The statement tells us that the crop condition 'continues' to be critical after the rains. This tells us that it was critical even before the rains. Thus this conclusion does not follow.

II. *The crop condition was expected to improve after the rains.* ⇒ The fact that a report had to be made about the crop condition after the rains implies that a change was expected. That the statement reported no change in the condition despite the rains. This tells us that the rain was expected to improve the condition of the crops. Thus this conclusion follows.

31. According to the dictionary order,

KNACK → KNIT → KNOB → KNOW

Clearly, KNOW will appear fourth in the dictionary.

32. Considering the options:

A) 4 2 3 1 5 7 6 9 8 10: EVONMGRNET

B) 7 3 1 5 2 4 6 8 10 9: GONMVERETN

C) 7 3 2 4 6 1 5 8 9 10: GOVERNMENT

D) 5 1 6 3 2 8 4 7 9 10: MNROVEEGNT Clearly

GOVERNMENT is the only meaningful word. Hence

answer is 73246158910.

33.

Letter	Z	Y	X	W	V	U	T	S	R	Q	P	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A	No.	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

Here Z represents 1, Y represents 2,, and A represents 26.

11, 15, 26, 13, 22 → PLANE

15, 11, 22, 26, 13 → LPEAN

11, 22, 15, 13, 26 → PELNA

26, 22, 15, 13, 11 → AELNP

Clearly, "PLANE" is the only meaningful word.

34. Converting to words:

5, 18, 5, 8, 1, 3, 5 - EREHACE

20, 5, 1, 3, 8, 5, 18 - TEACHER

5, 1, 3, 5, 20, 8, 18 - EACETHR

18, 5, 3, 8, 1, 5, 20 - RECHAET

Clearly, TEACHER is the only meaningful word.

Hence the answer is '20, 5, 1, 3, 8, 5, 18'.

35. Let's check each option,

A) 66, 12, 58, 40 → LAKS

B) 77, 43, 76, 31 → KARA

C) 85, 31, 77, 44 → LAKE

D) 97, 00, 77, 12 → LAKA

Hence answer is 85, 31, 77, 44.

36. In option CORRECT and REPENT, there is letter 'T' but in word CORRESPONDING there is no letter 'T'.

In option RESPONSE, there are 2 Es but CORRESPONDING has only E.

Word DISCERN can be formed as CORRESPONDING.

Hence answer is DISCERN.

37. Let's check each option,

1) ORIGINATE → Can be formed as GERMINATION.

2) TERMINAL → Cannot be formed as there is 'L' in GERMINATION.

3) EMIGRANT → Can be formed as GERMINATION.

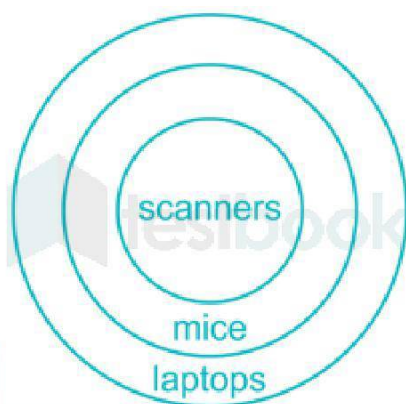
4) GERMAN → Can be formed as GERMINATION.

Thus word TERMINAL cannot be formed from the word GERMINATION.

38. Country is within a Continent and City is within a Country.

So the figure in option 3 clearly describes this relation.

39. The least possible Venn diagram of the two statements will be:



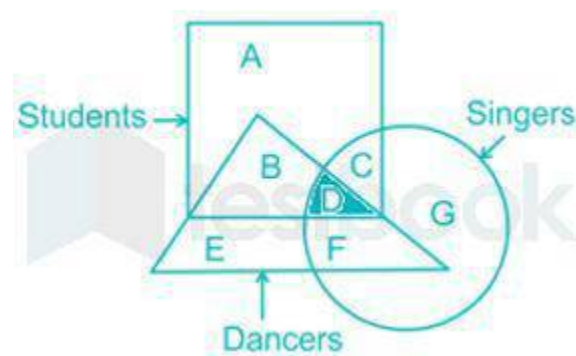
Conclusions:

I. All mice are scanners → it's possible but not definite, hence false.

II. All scanners are laptops → it's definite, hence true.

Hence only conclusion II follows.

40.



The portion D represents the students who are both singers and dancers.

41. Brinjal is used as a vegetable but meat is a non-veg having no relation with vegetable.

So the option 3 best describes the given situation.

42. In figure 1,

Center element = sum of diagonal elements – sum of the other diagonal elements

$$= (100 + 12) - (25 + 30)$$

$$= 112 - 55 = 57$$

Similarly in figure 2,

$$= (52 + 102) - (36 + 28)$$

$$= 154 - 64 = 90$$

Hence the missing number is 90.

43. The pattern is as follows, In

$$\text{first column: } (11 \times 4) + 6 = 50$$

$$\text{In second column: } (20 \times 3) + 4 = 64$$

$$\text{Thus in third column: } (35 \times 2) + 3 = 73$$

Hence missing number is 73.

44. The pattern followed is row wise:

$$\text{In row 1: } 2 + 2 = 4 \text{ \& } 4^4 + 1 = 256 + 1 = 257$$

$$\text{In row 2: } 3 + 2 = 5 \text{ \& } 5^5 + 1 = 3125 + 1 = 3126$$

$$\text{In row 3: } 4 + 2 = 6 \text{ \& } 6^6 + 1 = 46656 + 1 = 46657$$

Thus 3126 is the answer.

45. Let age of Sonu be X and that of Monu be Y .

We rewrite the equations using the conditions given:

Using condition 1,

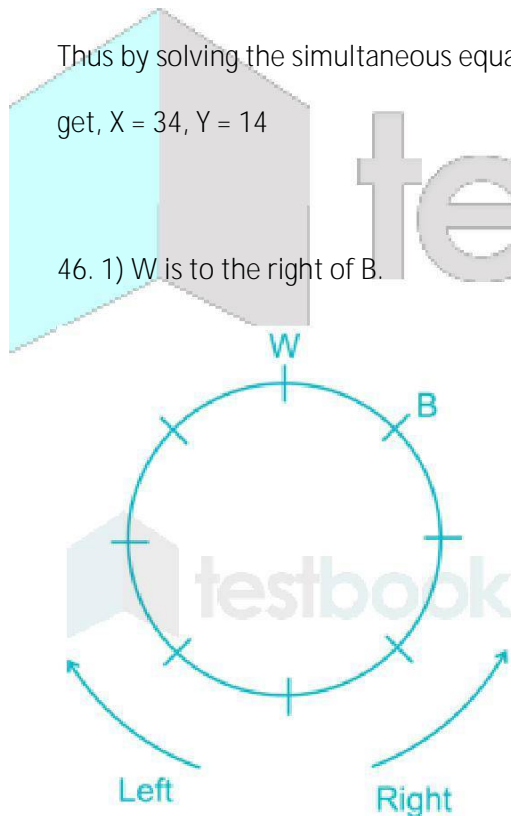
$$(X - 4) = 3(Y - 4)$$

$$\begin{aligned} \therefore X - 3Y &= -8 \text{ Using} \\ \text{condition 2, } (X + 6) &= 2(Y + 6) \\ \therefore X - 2Y &= 6 \end{aligned}$$

Thus by solving the simultaneous equations we

get, $X = 34$, $Y = 14$

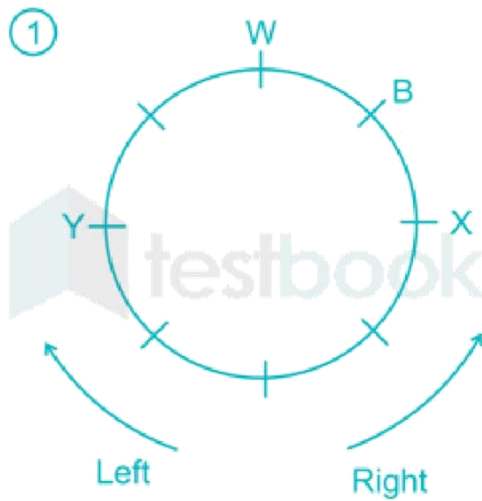
46. 1) W is to the right of B.



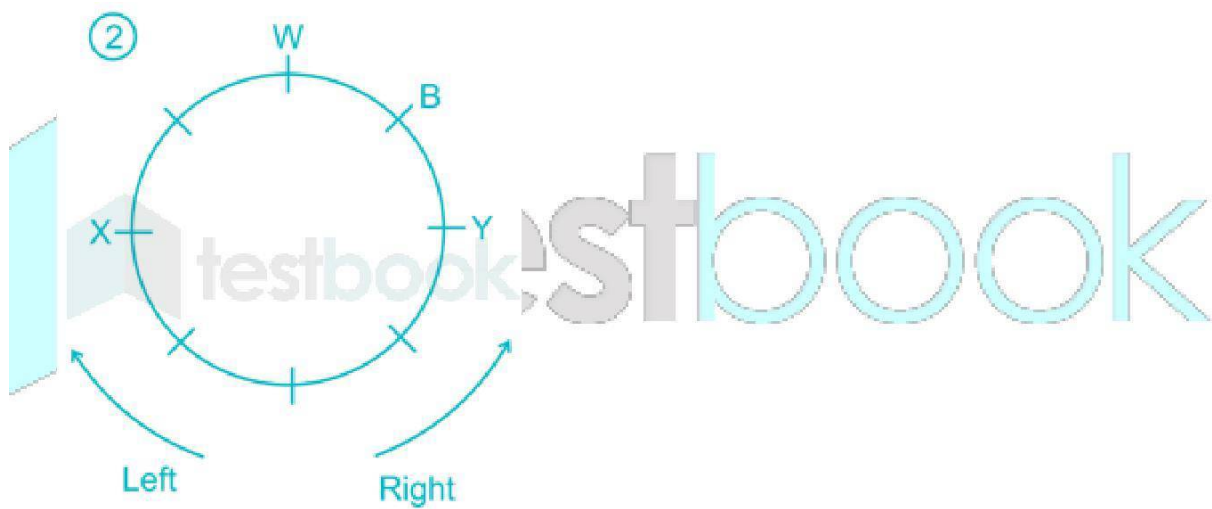
2) Y is facing X. No two men or women are sitting together.

So we get 2 cases.

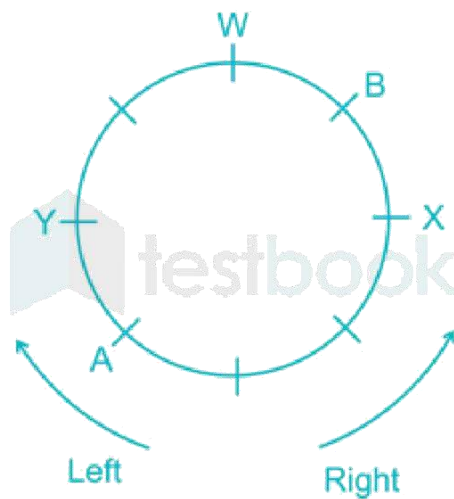
Case 1



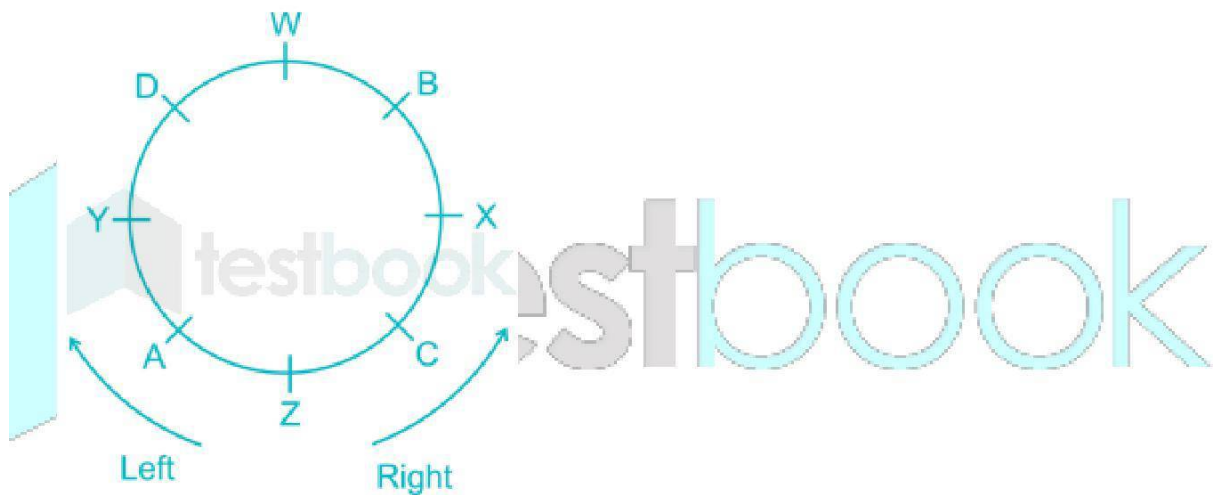
Case 2



3) Y is to the left of A. So,
case 2 is not possible.



4) C is to the right of Z.



Hence, W and Y are sitting adjacent to D.

47. Let's check each option,

- 1) $- + = \times \Rightarrow 7 - 2 + 3 = 5 \times 6 \Rightarrow 8 = 30 \Rightarrow \text{false.}$
- 2) $+ \times = + \Rightarrow 7 + 2 \times 3 = 7 + 6 \Rightarrow 13 = 11 \Rightarrow \text{false.}$
- 3) $= \times + - \Rightarrow 7 = 2 \times 3 + 5 - 6 \Rightarrow 7 = 5 \Rightarrow \text{false.}$
- 4) $\times = + + \Rightarrow 7 \times 2 = 3 + 5 + 6 \Rightarrow 14 = 14 \Rightarrow \text{true.}$

Hence the mathematical signs that balance the given expression is $\times = + +$.

48. Let no. of pineapple bought = x units

No. of watermelon bought = y units

$$7x + 5y = 38$$

Using options,

if $x = 2$ then $y = 24/5$, which is not possible.

If $x = 3$, then $y = 17/5$, which is not possible.

If $x = 4$, then $y = 2$. Hence, possible.

So, 4 is the correct answer.



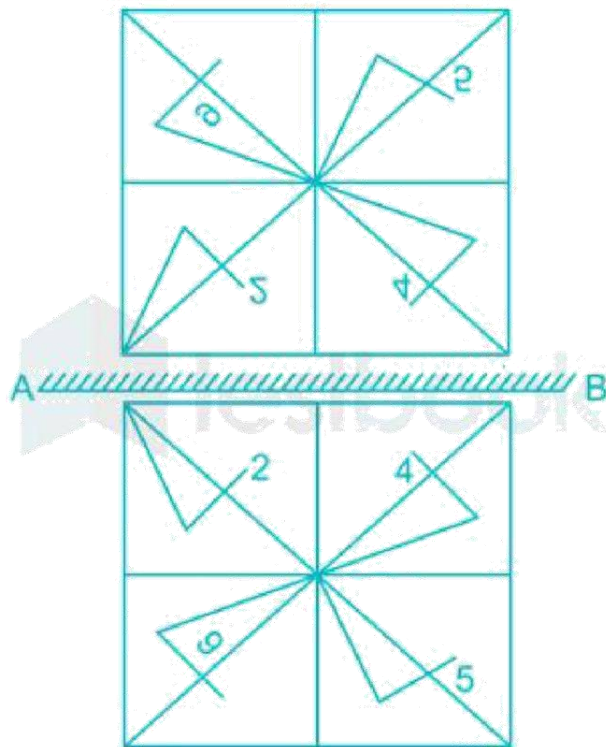
The part marked as 1 is present in only option number 2. In all other option this part is absent.

All other parts are also present in option 2.

Hence answer is figure 2.

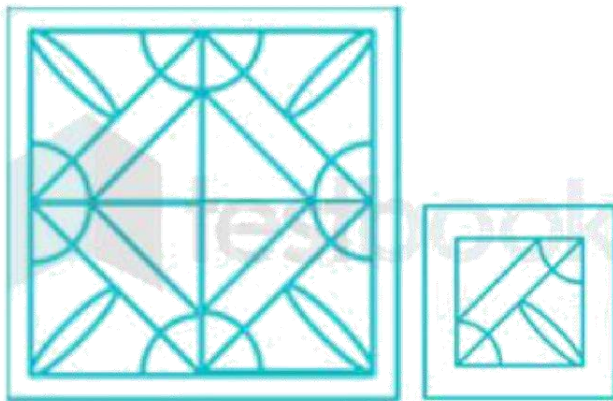
50. Clearly, option 1 includes all the parts of the question figure whereas in option 2 there is only 1 small square; in option 3 there is no squares and in option 4 there is no small squares available so only option 1 is correct one.

51. The mirror image will be as follows,



Hence answer is option 3.

52. Upon completing this figure,



Hence image that complete the image is figure 1.

53. Observe the figures where ÷ is on the top i.e. figure 1, 3 and 4.

O and × are adjacent to each other.

From figure 4,

+ and O are adjacent to each

other. So the arrangement will be,

+ O ×

From figure 3, and + are adjacent to each other.

So the arrangement becomes,

+ O ×

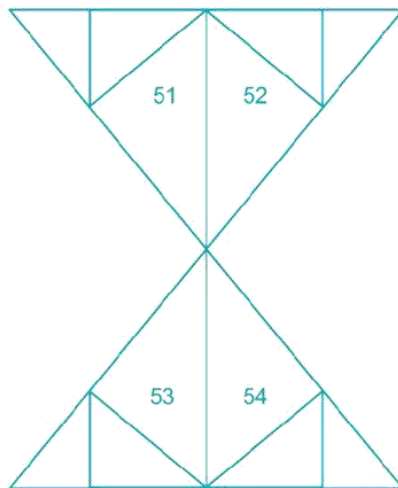
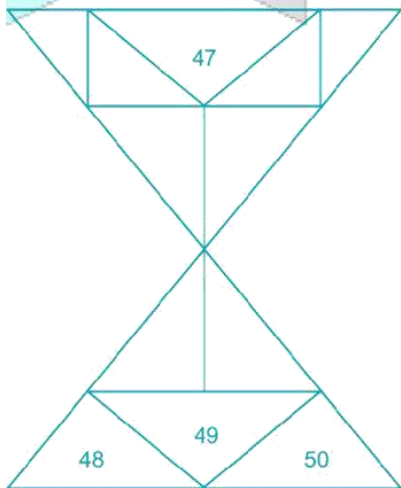
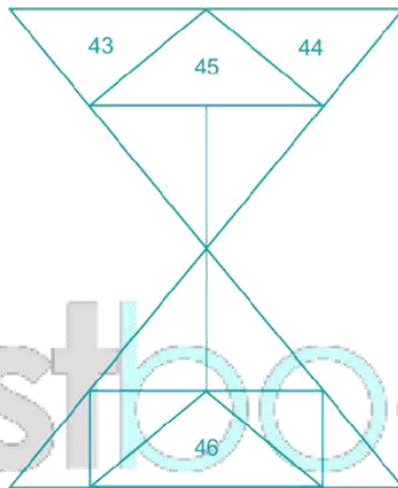
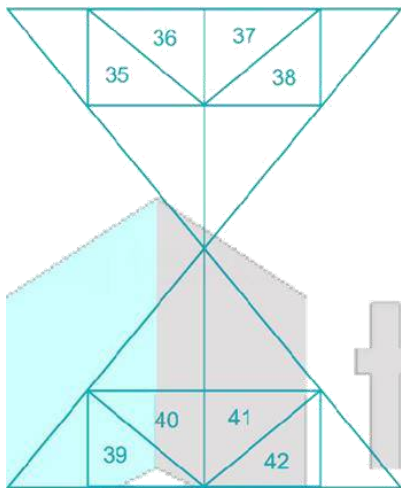
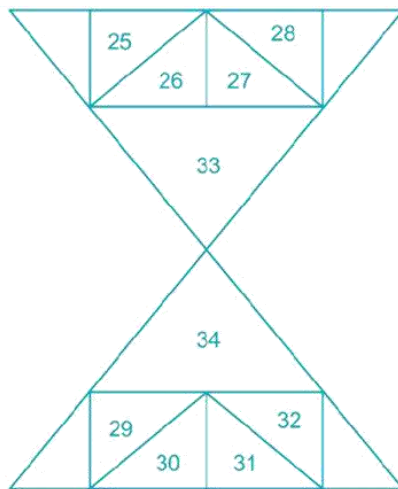
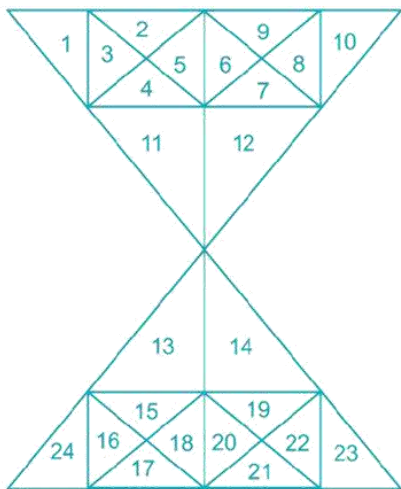
Hence O will be opposite to as 1st and 3rd element will be opposite to each other.

54. We can see from the question figure that only the left hand side and the front side of the cube will be partly shaded thus the correct option is 2.

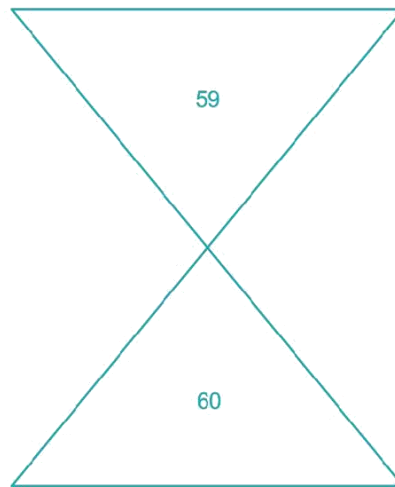
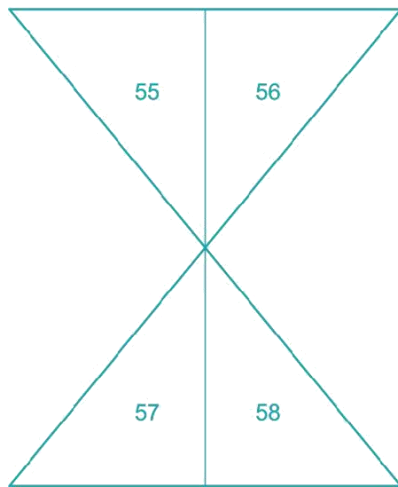
55. When the paper is folded in this way, then the first fold will imply 4 cuts sideways. With the second fold, it again implies 4 cuts and finally with the downward fold, the paper again gets cut 4 times and in the downward direction.

So the answer is option 4.

56.



testbook



Hence, there are 60 triangles in total.

57. It is not always necessary that a senior employee is always more talented than young ones. Young minds are approaching with new ideas and are industrious. So, promotion should only **be based upon employee's hard work and capability.**

58. The given statement talks about the qualities of a good administrator which are task orientation as well as empathy towards the problems of his people. So this implies that both qualities have to be there to define one as a good administrator. The given statement has no reference to whether some administrators are empathetic or not.

Hence only inference I follows.

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