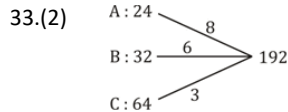


32.(4) We can conclude
 $A : (B + C + D) = 100 : 460 = 10 : 46$
 $\Rightarrow A$'s contribution = 10 lakhs
 $\& B : (A + C + D) = 100 : 366.66$
 $= 3 : 11 = 12 : 44$
 $\Rightarrow B$'s contribution = 12 lakh
 $\& C : (A + B + D) = 40 : 100$
 $= 2 : 5 = 16 : 40$
 $\Rightarrow C$'s Contribution = 16 lakh
Hence, the contribution of D = $56 - (10 + 12 + 16) = 18$ lakhs



For 1st 6 days
Workdone by A, B and C = $(8 + 6 + 3) \times 6 = 102$ units
Balance = $192 - 102 = 90$ units
Since B left 6 days before the completion
Hence work by A alone in those 6 days = $8 \times 6 = 48$
Hence total days required = $6 + 6 + \frac{(90 - 48)}{8 + 6} = 15$ days.

34.(2) Let no. of inlet = x
And let no. of outlet = $8 - x$
According to question
 $\frac{3x}{12} - \frac{3(8-x)}{36} = 1$
 $9x - 24 + 3x = 36$
 $x = 5$

35.(1) There is a loss of 12.5% i.e. $\frac{1}{8}$
so,
let new SP = 7
CP = 8
original sp = $7 \times 2 = 14$
%profit = $\frac{6}{8} \times 100$
= 75%

36.(1) Let CP of whole fruit = Rs. A
He sold $\frac{3}{5}$ th part at 10% profit and
remaining $\frac{2}{5}$ th part at 5% loss
Total profit = Rs. 1500
 $1500 = \left[\frac{3}{5} \times A \times \frac{10}{100} - \frac{2}{5} \times A \times \frac{5}{100} \right]$
CP = A = Rs. 37500

37.(3)

5Q	5Q
Group 1	Group 2

No. of ways = $(2G_1 \& 4G_2)$ or $(3G_1 \& 3G_2)$ or $(4G_1 \& 2G_2)$
[here, $2G_1$ means 2 questions from group 1 and so on]
= $(5C_2 \times 5C_4) + (5C_3 \times 5C_3) + 5C_4 \times 5C_2$
= $10 \times 5 + 10 \times 10 + 5 \times 10 = 200$ ways

38.(4) Hence Both will fill it in $\frac{30}{3+2} = 6$ minutes
But due to exhaust,
In 4 minutes, $5 \times 4 = 20$ units have been leaked.
 \therefore 20 units leaked in 6 minutes.
 \therefore 30 units can be leaked by exhaust in $\frac{6 \times 30}{20} = 9$ min.

39.(5) **For Ramesh**
Let SP = Rs. x
 \therefore Cost price for ramesh
= $x \left[\frac{100}{125} \right]$
= $\frac{4}{5}x$
 $P_{Ramesh} = x - \frac{4}{5}x = \frac{x}{5}$

For Shika (on SP)
Cost price for shikha
= $x \left(\frac{100 - 25}{100} \right) = \frac{3}{4}x$
 $\therefore P_{Shikha} = \frac{x}{4}$

According to question
 $\frac{x}{4} - \frac{x}{5} = \text{Rs. } 1000$
 $\Rightarrow x = \text{Rs. } 20000$

40.(3) Let total workers = x
Sol.
 $\frac{20}{100} \times \frac{75}{100} \times x + \frac{80}{100} \times \frac{25}{100} \times x = 126$
 $\Rightarrow x = \frac{126 \times 20}{7} = 360$

41.(5) I. $\sqrt{441x^2 - 111} = (15)^2$ II. $\sqrt{121y^2 + 6^3} = 260$
 $21x^2 = 225 + 111 = 336$ $\Rightarrow 11y^2 = 44$
 $x^2 = 16$ $y^2 = 4$
 $x = \pm 4$ $y = \pm 2$

No relation between x & y

42.(2) I. $17x + 169 - 114 = 15^2$ II. $y = \pm 2$
 $\Rightarrow 17x = 170$
 $x = 10$
 $x > y$

43.(1) I. $17x = 169 + 14 + 25 + 4x$ II. $5y = 345 - 260$
 $\Rightarrow 13x = 208$ $y = \frac{85}{5} = 17$
 $\Rightarrow x = 16$
 $\therefore x < y$

44.(4) I. $6y^2 + \frac{1}{2} = \frac{7}{2}y$ II. $12x^2 - 10x + 2 = 0$
 $\Rightarrow 12y^2 - 7y + 1 = 0$ $\Rightarrow 6x^2 - 5x + 1 = 0$
 $\Rightarrow 12y^2 - 4y - 3y + 1 = 0$ $\Rightarrow 6x^2 - (3+2)x + 1 = 0$
 $\Rightarrow 4y(3y-1) - 1(3y-1) = 0$ $\Rightarrow 6x^2 - 3x - 2x + 1 = 0$
 $\Rightarrow (3y-1)(4y-1) = 0$ $\Rightarrow 3x(2x-1) - 1(2x-1) = 0$
 $y = \frac{1}{3}, \frac{1}{4}$ $x = \frac{1}{3}, \frac{1}{2}$
 $\therefore x \geq y$

45.(1) I. $4x^2 = 49$
 $x = \pm \frac{7}{2}$
II. $9y^2 - 66y + 121 = 0$
 $9y^2 - 33y - 33y + 121 = 0$
 $3y(3y-11) - 11(3y-11) = 0$
 $y = \frac{11}{3}, \frac{11}{3}$
 $\therefore x < y$

46.(5) Let qualified male from state A in 2012 = $7x$
And qualified female from state A in 2012 = $5x$
According to question
 $2x = 102$
 $x = 51$

Total appeared candidates
= $\frac{12 \times 51}{60} \times 100 = \frac{12 \times 51 \times 5}{3} = 1020$

47.(3) Number of appeared candidate
from state B in 2011 = $\frac{4}{3} \times 660 = 880$
According to question
= $880 \times \frac{40}{100} \times \frac{1}{11} \times (11+12) = 736$

48.(3) Required ratio = $\frac{9 \times 60 + 12 \times 43 + 96 \times 7}{76 \times 3 + 52 \times 6 + 4 \times 70}$
= $\frac{540 + 516 + 672}{228 + 312 + 280}$
= $\frac{1728}{820}$
= 432 : 205

49.(3) Required % = $\frac{9 \times 60 - 4 \times 70}{4 \times 70} \times 100$
= $\frac{260}{280} \times 100 = \frac{13}{14} \times 100 = 92\frac{6}{7}\%$

50.(1) Total passed candidate from state A in 2014 = $1356 - 96 \times 7$
 $= 684$
 Required% = $\frac{760 - 684}{760} \times 100$
 $= \frac{76}{760} \times 100 = 10\%$

51.(3) Number of elements in each row = H.C.F. of three categories
 \therefore Total no. of elements in unit of king C = H.C.F. of 480, 400 and 180
 $= 20$

So, total number of rows
 $= \frac{480}{20} + \frac{400}{20} + \frac{180}{20} = 53$

Similarly, total number of rows in unit of king D

$= \frac{500}{50} + \frac{450}{50} + \frac{200}{50} = 23$

\therefore Required difference = $53 - 23 = 30$

52.(4) Number of soldiers left
 $= 16\frac{2}{3}\%$ of $(650 + 420 + 160 \times 4)$
 $= 285$

Then, according to question,

$6x + 5x + (2 \times 4)x = 285$

$\Rightarrow x = \frac{285}{19} = 15$

\therefore Required number of soldiers = $15 \times 6 = 90$

Total soldiers of A = $540 + 350 + 150 \times 4 = 1490$

Total soldiers of E = $750 + 250 + 250 \times 4 = 2000$

\therefore Required percentage = $\frac{510}{2000} \times 100 = 25.5\%$

53.(2)

54.(4) Required number of elephants

$= 250 + \frac{200 + 150}{5} = 320$

55.(5) Required ratio = $\frac{\frac{1}{3} \times (650 + 420 + 160 \times 4)}{\frac{1}{3} \times (620 + 370 + 120)}$

$= \frac{1710}{1110}$
 $= \frac{57}{37}$

56.(3) $30 + 35 = 65$

$65 + 35 = 100$

$100 + 65 = 165$

$165 + 100 = 265$

$265 + 165 = 430$

57.(2) $3 \xrightarrow{+2} 5 \xrightarrow{+2} 7 \xrightarrow{+3} 10 \xrightarrow{+3} 13 \xrightarrow{+4} 17$

58.(5) $16 \xrightarrow{+1} 17 \xrightarrow{-1} 15 \xrightarrow{+1} 18 \xrightarrow{-1} 14 \xrightarrow{+1} 19$

59.(1) $3125 \xrightarrow{(5)^5} 256 \xrightarrow{(4)^4} 27 \xrightarrow{(3)^3} 4 \xrightarrow{(2)^2} 1 \xrightarrow{(1)^1}$

60.(2) $3 \xrightarrow{2 \times 3} 6 \xrightarrow{3 \times 6} 18 \xrightarrow{6 \times 18} 108 \xrightarrow{18 \times 108} 1944$

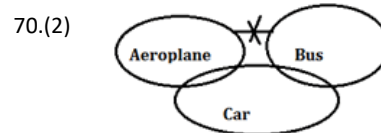
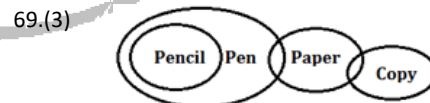
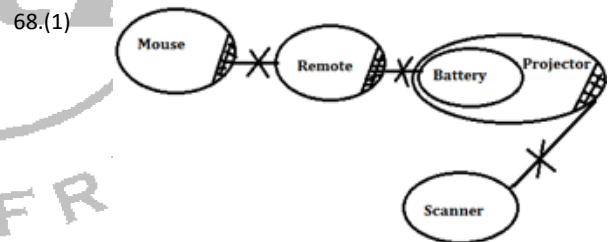
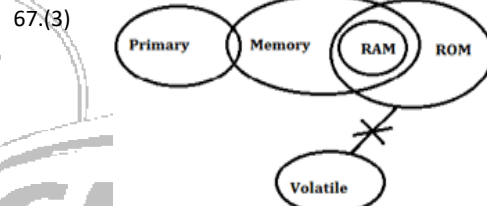
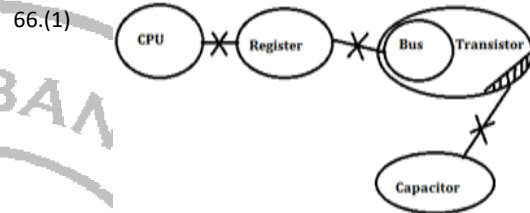
61.(2) 35% of $1579 + 29\%$ of $4516 = ? \times 41 + 468 + 773.98 - 199.53$
 or, $? \times 40 + 470 + 770 - 200 \approx \frac{35 \times 1600}{100} + \frac{30 \times 4500}{100}$
 or, $? \times 40 + 1240 - 200 \approx 560 + 1350 = 1910$
 or, $? \times 40 \approx 1910 - 1040 = 870$
 $\therefore ? \approx \frac{870}{40} = 21.75 \approx 20$

62.(3) $(36 + ?) \times 9 = 49.05 \times 19.95 - 24.99 \times 14.12$
 or, $324 + 9 \times ? \approx 50 \times 20 - 25 \times 14$
 or, $9 \times ? \approx 1000 - 350 - 324 = 326$
 $\therefore ? \approx \frac{326}{9} \approx 36$

63.(3) $? = \frac{57 \times 394}{100} - \frac{2.5 \times 996}{100}$
 $\approx 224.58 - 25 = 199.58 \approx 200$

64.(4) $? = 96.996 \times 9.669 + 0.96$
 $\approx 97 \times 9.7 + 1 \approx 941 + 1 = 942 \approx 940$

65.(3) $? \approx 26 \times 38 - 309$
 $= 988 - 309 = 679 \approx 680$

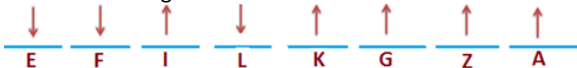


71-75. It is given that L sits fourth to left of A. A sits at one of the extreme ends of the line so there can be two possibilities.
Case 1- When A faces south, both the immediate neighbours of L face north. K sits second to left of Z. Z is not an immediate neighbor of L. Neither Z nor G sits at the extreme end of the line so Z sits immediate left to A and faces south. G faces opposite direction to F. Both the immediate neighbors of G face north. Immediate neighbours of F face opposite directions. Immediate neighbours of K face opposite directions. F faces to south direction so F sits immediate left to Z. E sits second to the

left of I so G sits second to the right to L but it is given that E does not sit near to L so this case will be eliminated.



Case 2- When A faces north, both the immediate neighbours of L face north. K sits second to left of Z. Z is not an immediate neighbor of L. Neither Z nor G sits at the extreme end of the line so Z sits immediate left to A and faces north. G faces opposite direction to F. Both the immediate neighbors of G face north. Immediate neighbours of F face opposite directions. Immediate neighbours of K face opposite directions. F faces to south direction so F sits immediate left to E. E sits second to the left of I so G sits second to the left to A. L faces south, so the final arrangement is-

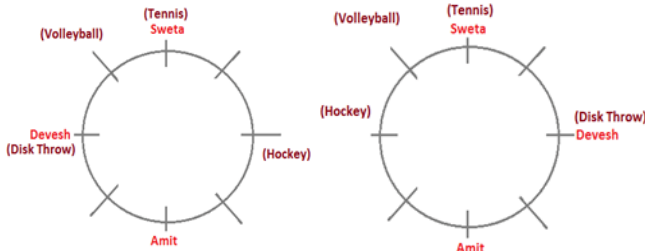


- 71.(4) 72.(5) 73.(1) 74.(4) 75.(2) 76-80.

From the given conditions, the one who likes Hockey sits 2nd place away from Amit. Hence Amit sits either 2nd to the right or 2nd to the left of the person who likes Hockey. Devesh sits opposite to the one who likes Hockey. Sweta likes Tennis and sits opposite to Amit. The one who likes Volleyball sits immediate right to the one who likes Tennis. Devesh likes Disc throw.

Case-I

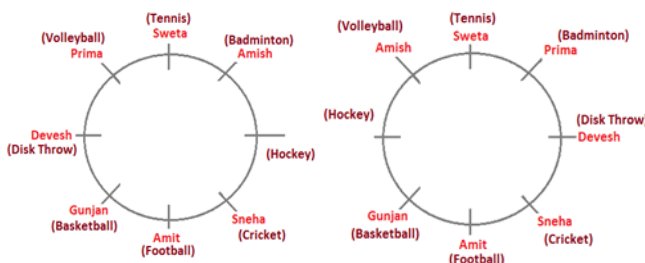
Case-II



From the given conditions, only one person sits between Amish and Prima but neither of them is an immediate neighbor of Amit and neither of them likes Hockey. Hence Amish sit either immediate right or immediate left of Sweta. The one, who likes Basketball sits 2nd to the right of the one, who sits immediate right of Sweta. Amish sits 3rd place away from the one who likes Disc Throw. Hence Amish sits immediate left to Sweta in case I and immediate right in case II so prima sits immediate right to Sweta in case I and immediate left in case II. Gunjan and the one who likes Badminton sit opposite to each other. Hence Gunjan sits immediate left of Amit. Gunjan and Sneha are immediate neighbors of the one who likes Football. Hence Amit likes Football. Also rest sport Cricket is liked by Sneha.

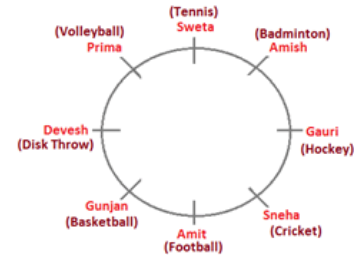
Case-I

Case-II



But From the given condition, Amish does not sit opposite to the one who likes Cricket. Hence Case-II is eliminated and Case-I is continued. And the rest position is for Gauri.

Case-I



- 76.(1) 77.(4) 78.(2) 79.(3) 80.(5) 81-85.

It is given that I does not live on first floor and there are three persons live between F and I so there can be two possibilities. It is given that the person who lives on 7th floor likes Dove deodorant.

Case-1

Case-2

Floor	Person	Deodorant
7		Dove
6	F	
5		
4		
3		
2	I	
1		

Floor	Person	Deodorant
7	F	Dove
6		
5		
4		
3	I	
2		
1		

It is given that there is only one person lives between the floor of F and the one who likes secret temptation deodorant. There are only two floors between the floor of K and the floor on which the person who likes secret temptation deodorant lives. The one who likes Nivea deo lives on one of the even-numbered floors above the one who likes Secret temptation deo. E lives immediately above J and does not like Secret temptation deodorant. K does not like Dove deodorant. The one who likes Jovan deo lives on one the odd-numbered floors below J. The one who likes Nike deodorant lives immediately above K. K does not like Jovan deodorant.

Case-1

Case-2

Floor	Person	Deodorant
7		Dove
6	F	Nivea
5	E	
4	J	Secret temptation
3		Jovan
2	I	Nike
1	K	

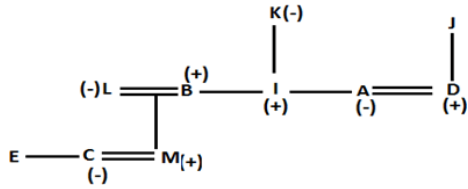
Floor	Person	Deodorant
7	F	Dove
6	E	Nivea
5	J	Secret temptation
4		
3	I	Nike
2	K	
1		Jovan

It is given that only one person lives between the one who likes Spinz deodorant and the one who likes Eva deodorant, so Case-1 will be eliminated. H lives on one of the floors above G. H does not like Spinz deodorant so the final arrangement is-

Floor	Person	Drink
7	F	Dove
6	E	Nivea
5	J	Secret temptation
4	H	Eva
3	I	Nike
2	K	Spinz
1	G	Jovan

- 81.(2) 82.(1) 83.(4) 84.(3) 85.(4)

86-88.



99.(2) I. $Z > N$ (True)

II. $R \geq M$ (False)

100.(5) I. $B < J$ (False)

II. $Z > Q$ (False)

86.(5)

87.(3)

88.(3)

89-91. Size of phone containers in which different phones are kept :

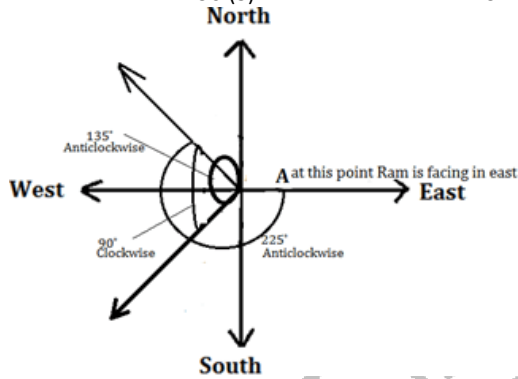
P's box > M's box > O's box > Q's box > R's box > N's box

89.(1)

90.(3)

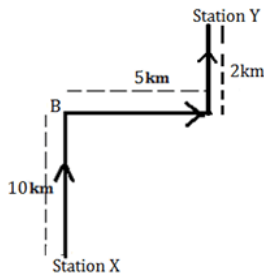
91.(2)

92.(3)



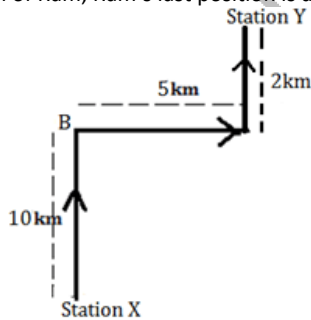
93.(5)

Distance of station X to station Y = $\sqrt{12^2 + 5^2}$
 $= \sqrt{169} = 13\text{km}$
 $= 13\text{km (13000m)}$.



94.(2)

Point B is in South- East direction with respect to last position of Ram, Ram's last position is at Station X.



95.(2)



96.(1)

I. $Q > M$ (False)

II. $O > I$ (True)

97.(1)

I. $C > Q$ (False)

II. $Z > K$ (True)

98.(3)

I. $S > Y$ (True)

II. $J > Y$ (True)