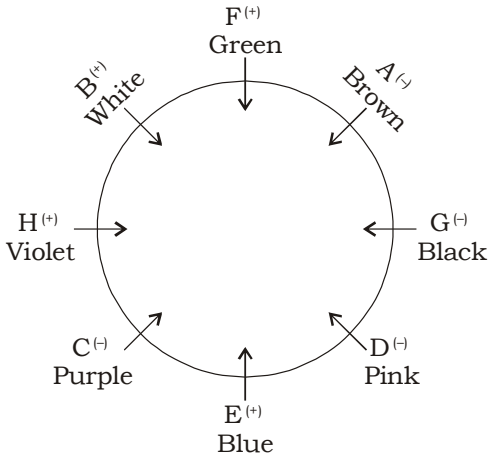
IBPS RRB PO PHASE - I - 109 (SOLUTION)

REASONING

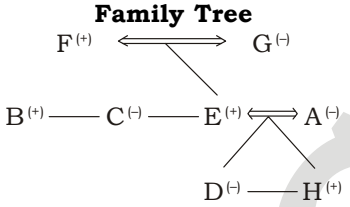
(1–5) :

1. (5) 2. (4) 3. (1)
4. (1) 5. (2)

(6 - 10) :

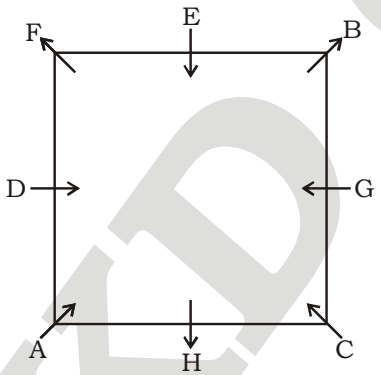


Family Tree



6. (1) 7. (2) 8. (2)
9. (2) 10. (3)

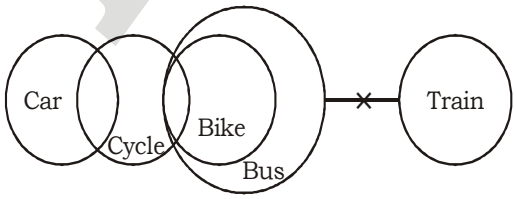
(11-15) :



11. (5) 12. (3) 13. (4)
14. (2) 15. (4)

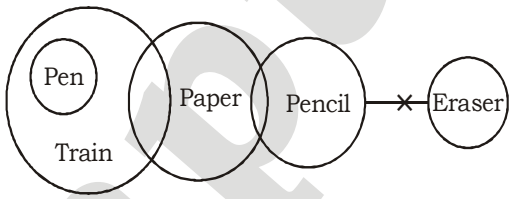
(16-17) :

16. (4)



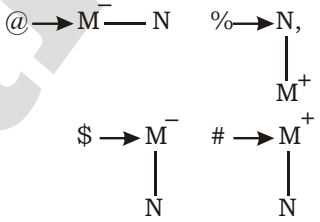
I. No train is bike → True
II. Some cycle is bus → True
III. Some train is car] either or
IV. No train is car]
Only conclusion I, II and either conclusion III or IV follow

17. (2)

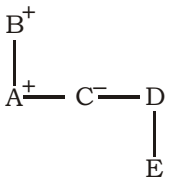


I. No eraser is paper ←
II. Some paper is pen → false] either or
III. Some eraser is pen → false]
IV. Some eraser are paper ←
Only either conclusion I or IV follows.

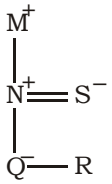
(18 – 20) :



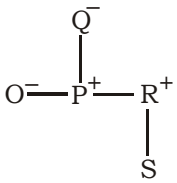
18. (3)



19. (3)



20. (4)



(21-25):

21. (2)

From I : (Abhinav + Chunky) > Bipin > (Ebrahim + Dinesh)
We can't answer the question on the basic of statement I.

From II : Chunky > Abhinav > (Ebrahim + Dinesh) and chunky has the second position in decending order of their salaries.
Hence, Bipin is highest salary

22. (4)
From I : You are late → Pic, na, ta
From II : We are fast → Ja, ho, pic
from I and II we can not find the code of 'fast'

23. (1)
From I : D ← N → O
↑
M
Hence copany 'O' is north-east of company M.
From II : M
↕
T
R → S
Hence II is not sufficient to answer the questions,

24. (3)
From I : Kamlesh > Trilok > Ritesh, Manoj, Queen
Hence, Kamlesh is tallest among them
From II : Kamlesh > Ritesh, Trilok, Manoj > Queen
Hence, Kamlesh is tallest among them.

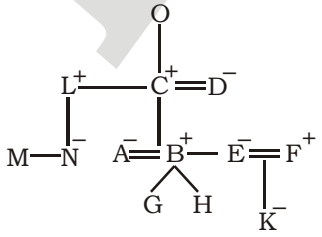
25. (4)

(26-30) :

Floor	Person	Fruits
7	P	Banana
6	Y	Mango
5	X	Apple
4	N	Grapes
3	M	Guava
2	O	Orange
1	Z	Papaya

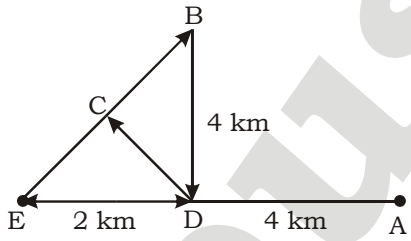
26. (3) 27. (1) 28. (3)
29. (5) 30. (2)

(31–34) :



31. (5) 32. (2) 33. (5)
34. (5)

(35-36) :



35. (4) 36. (4)

(37-40) :

Friends	Vegetable	Month
Puja	Drumstick	June
Queen	Cabbage	March
Reena	pumpkin	June
Shreya	Tomato	December
Tina	Potato	June
Uma	Carrot	December
Vibha	Cauliflowers	December
Winnie	Brinjal	March

37. (5) 38. (5) 39. (3)
40. (5)

MATHS

(41-45) :

41. (3) $4655.03 \div 315.98 + 4568.12 \div 181.89 = ?$
$\approx$ $4655 \div 316 + 4568 \div 182$
$\approx$ $14.73 + 25.09 = 39.82 \approx 40$

42. (1) $99.98 \times 849.99 \div 213.04 = (?)^2$
$\Rightarrow (?)^2 \approx 100 \times 850 \div 213$
$\Rightarrow (?)^2 \approx 400$
$\therefore ? = 20$

43. (3) $\sqrt{575.985} + (5.899)^2 = ? \div \frac{10}{4.986}$

$\Rightarrow ? \times \frac{5}{10} \approx \sqrt{576} + (6)^2$

$= ? \times \frac{1}{2} = 24 + 36$

$= ? = 60 \times 2 = 120$

44. (4) $(2432 + 1587 + 1415) \div 1378 = ?$
$= 5434 \div 1378$
$= 3.94 \approx 4$

45. (5) $(17.93 \times 33.489 - 28.749 \times 3.04) \div \frac{\sqrt{1295} \times \sqrt{2210} + \sqrt{440}}{\sqrt{35.56} + \sqrt{50.23}} = ?$

$\Rightarrow$? $\approx (18 \times 33 - 29 \times 3) \div \frac{36+47+41}{6+7}$

$\Rightarrow$? $= (594 - 87) \div \frac{124}{13}$

$\Rightarrow$? $= 507 \times \frac{13}{124} = 53.15 \approx 53$

(46-50) :

46. (3) Required average

$= \frac{(660-380)+(740-480)+(620-440)}{3}$

$= \frac{280+260+180}{3}$

$= \frac{720}{3} = ₹\ 240$ thousand

47. (1) Total loss in March and April
= (640 + 560) – (380 + 340)
= ₹ 480 thousand

$\therefore$ Required loss% $= \left(\frac{480}{1200} \times 100\right)\%$

$= 40\%$

48. (5) Profit earned in February
= 740 – 480 = 260 thousand
Profit earned in may = 620 – 440
= 180 + thousand

= Required% $= \left(\frac{260-180}{180} \times 100\right)\%$

$= 44\frac{4}{9}\%$

49. (1) Profit earned in
January = 660 – 380 = ₹ 280 thousand
February = 740 – 480 = ₹ 260 thousand
March = 620 – 440 = ₹180 thousand
$\therefore$ Requaired answer is January.

50. (2) Income earned in July = $520 \times \frac{120}{100}$
= ₹ 624 thousand

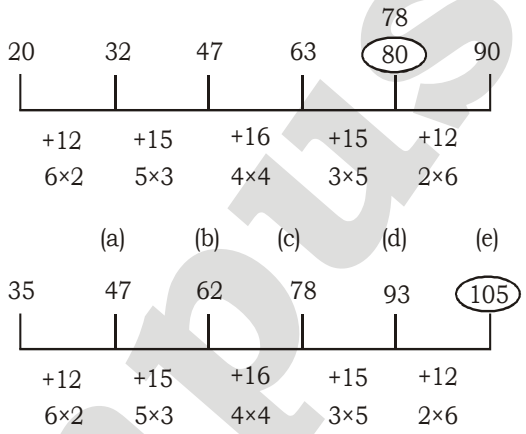
Expenditure in July = $400 \times \frac{90}{100}$
= ₹ 360 thousand

$\therefore$ profit% $= \left(\frac{624-360}{360} \times 100\right)\%$

$= 73\frac{1}{3}\%$

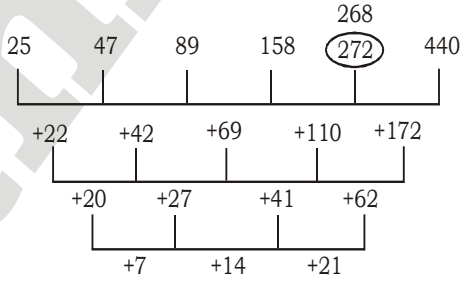
(51-55) :

51. (1) The number series is as follows:

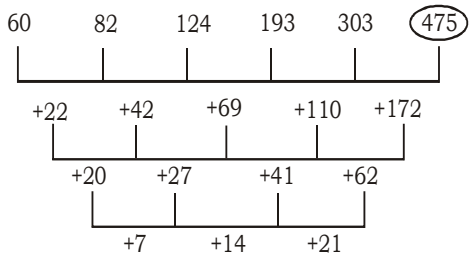


(a) (b) (c) (d) (e)

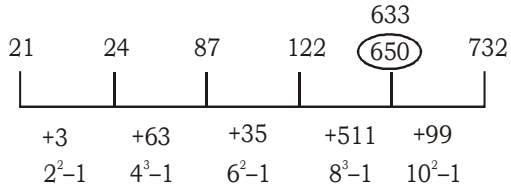
52. (2) The number series is as follows:



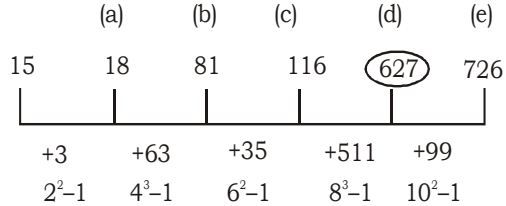
(a) (b) (c) (d) (e)



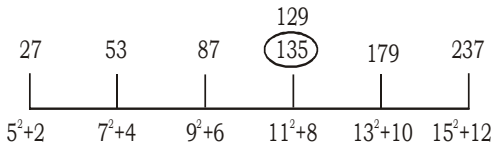
53. (3) The number series is as follows:

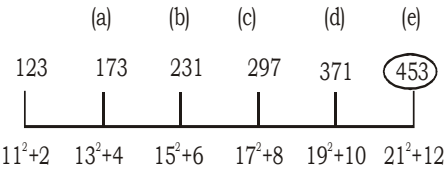


(a) (b) (c) (d) (e)

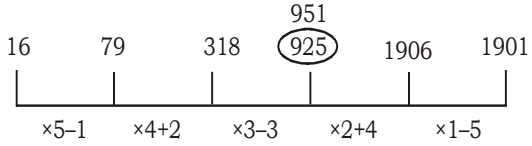


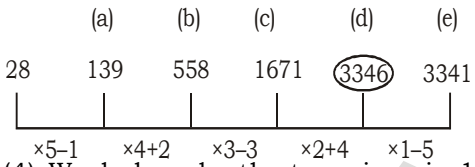
54. (4) The number series is as follows :





55. (2)





56. (4) Work done by the two pipes in 1 hr

$= \frac{1}{4}+\frac{1}{16}=\frac{15}{112}$

Time taken by these two pipes to fill the tank

$= \frac{112}{15}$ hrs.

Due to leakage, time taken

$= \frac{112}{15}+\frac{32}{60}$

= 8 hrs.

Therefore, work done by (two pipes + leak) in 1 hr = $\frac{1}{8}$

Work done by leak in 1 hr

$= \frac{15}{112}-\frac{1}{8}=\frac{1}{112}$

Leak will empty full cistern in 112 hrs.

57. (3) Ratio = 5 : 6

Let in third alloy R, total weight = 11 kg, where alloy P is 5 Kg. and alloy & is 6 kg.

Now, in 5 kg alloy P,

Copper = $\frac{2}{3}\times 5 = \frac{10}{3}$ kg

and in 6 kg alloy Q,

Copper = $\frac{4}{7}\times 6 = \frac{24}{7}$ kg.

Total copper in 11 kg alloys

$= \frac{10}{3}+\frac{27}{7}$

$= \frac{142}{21}$ kg.

$\therefore$ % of copper = $\left(\frac{142}{21}\times\frac{100}{11}\right)\%$

$\approx 61.5\%$

58. (2) Let each worker does 1 unit per day.

Since, $\frac{3}{5}$ work is completed in 50 days

$\therefore$ Total work = $\frac{48\times 50}{3}\times 5$ = 4000 units

$\therefore$ Remaining work = $4000 \times \frac{2}{5}$

= 1600 units

Now, 1600 units can be completed in remaining 40 days by $\frac{1600}{40}$

= 40 men.

$\therefore$ No. of men should be removed

= 48 – 40 = 8 men

59. (1) Let salaries of Sunil and Shushil one year before is w and x respectively and now y and z respectively.

ATQ,

$w : x = 3 : 4$ ..... (i)

$w : y = 4 : 5$ ..... (ii)

$x : z = 2 : 3$ ..... (iii)

Now, $\frac{w}{x}\times\frac{x}{z}=\frac{3}{4}\times\frac{2}{3}$

$\Rightarrow \frac{w}{z}=\frac{1}{2}$ ..... (iv)

and $\frac{y}{w}\times\frac{w}{z}=\frac{5}{4}\times\frac{1}{2}$

$\Rightarrow \frac{y}{z}=\frac{5}{8}$ ..... (v)

Now, $y + z = 4160$ (given)

$\Rightarrow$ (8 + 5) unit = 4160

$\Rightarrow$ 1 unit = 320

$\therefore$ Salary of Sunil now

= 320 × 5 = ₹1600

60. (3) No. of books > No. of pencils > no. of pens

Possible combinations,

Books = 11, Pencils = 8, Pens = 7

or Books = 10, Pencils = 9 Pens = 7

(61-65) :

61. (4) M.P of product P

$= \frac{250}{100} \times 120 \times \frac{100}{75}$

$= ₹\ 400$

$\therefore$ Required Difference

$= 1100 - 400 = ₹\ 700$

62. (2) Let CP of T = ₹ x

$\therefore$ Profit% = $\left(\frac{27}{x} \times 100\right)$

$\Rightarrow 10 = \left(\frac{27}{x} \times 100\right)$

$\Rightarrow x = ₹\ 270$

$\therefore$ SP = 270 + 27 = ₹ 297

Discount% = $\left(\frac{1100-297}{1100} \times 100\right)\% = 73\%$

Let CP of Q = ₹ x

$\therefore$ P% = $\left(\frac{22}{x} \times 100\right)$

$\Rightarrow 10 = \left(\frac{22}{x} \times 100\right)$

$\Rightarrow x = ₹\ 220$

$\therefore$ SP = 220 + 22 = ₹ 242

Discount% = $\left(\frac{1100-242}{1100} \times 100\right)\%$

= 78%

Discount% for R = $\left(\frac{300-(180+27)}{300} \times 100\right)\%$

= 31%

$\therefore$ Required difference

= (78 + 31) – 73

= 109 – 73 = 36%

63. (5) SP of product S = 320 + 16

= ₹ 336

$\therefore$ M.P = $\left(\frac{336}{27} \times 100\right)$ = ₹1244.44

SP of product Q = ₹ 242 (See Q. No. 62)

$\therefore$ Required total

= 1244.44 + 242

= ₹ 1286.44

64. (2) S.P of Product P = $250 \times \frac{120}{100}$ = ₹ 300

S.P of Product T = ₹ 297 (See Q. No. 62)

$\therefore$ Total SP = 300 + 297

= ₹ 597

MP of Product P = $\frac{300}{75} \times 100$

= ₹ 400

Total MP = 400 + 1100 = ₹ 1500

Total Discount = 1500 – 597

= ₹ 903

$\therefore$ Discount% = $\left(\frac{903}{1500} \times 100\right)\%$

= 60.20%

65. (4) SP of product O = $600 \times \frac{69}{100}$

= ₹ 414

$\therefore$ Profit% $\left(\frac{414-360}{360} \times 100\right)\%$

= 15%

66. (1) Let the capacity of tank is 180 litres.

$\therefore$ Pipe P fills 4 units per minute, and pipe Q fills 3 units per minute.

Now,

In first minute, 4 units filled and in second minute, 3 unit emptied.

$\therefore$ In 2 minutes, only 1 unit is filled Last 4 units will be filled by pipe Q in 1 min.

So, remaining 180 – 4 = 176 units will be filled in 176 × 2 = 352 minutes.

$\therefore$ Total time taken = 352 + 1

= 353 minutes

67. (3) Let their quantities be 40 litres, 20 litres and 30 litres respectively.

50% of mixture = 45 litres.

New quantities = (20 + 45) litres, 10 litres, 15 litres

Total quantities = 90 litres

50% mixture = 45 litres

New quantities = 32.5 litres, (5+45) litres, 7.5 litres

$\therefore$ % of N in final mixture

= $\left(\frac{7.5}{90} \times 100\right)\% = 8.33\%$

68. (4) Let Swati takes x hours, then Priti takes $(x-3)$ hours.

and total work = $[x(x-3)]$ units ..... (i)

Swati does $(x-3)$ units per hour and Priti does x units per hour.

In 4 hours Priti does $4x$ units and in remaining 10 hours. Swati does 10 $(x-3)$ units = $(10x-30)$ units

Total work = $4x + 10x - 30 = (14x - 30)$ units ..... (ii)

From (i) and (ii),

$[x(x-3)] = 14x - 30$

$\Rightarrow x^2 - 3x = 14x - 30$

$\Rightarrow x^2 - 17x + 30 = 0$

$\Rightarrow x = 2, 15$

The value of $x = 2$ is not possible because $(x-3)$ gives negative value.

$\therefore$ x = 15 hours.

69. (3) Let A, B and C got $3x$, $6x$, and $8x$ respectviley

Now, B gets = $6x \times \frac{3}{4} = 4.5x$

Therefore, (A + C) gets

= $(3x + 6x + 8x) - 4.5x = 12.5x$

New ratio = Let A and C got $8y$ and $17y$ respectviley

ATQ,

$8y + 17y = 12.5x$

$\Rightarrow x = 2y$

$\Rightarrow 3x = 6y$

$\therefore$ Difference between $8y$ and $6y$ = 100

$\Rightarrow 2y =$ ₹ 100

$\Rightarrow y =$ ₹ 50

$\therefore x =$ ₹ 100

$\therefore$ C's actual share = $100 \times 8 =$ ₹ 800

70. (4) Let quantity of mixture = 70 litres, then quantity of acid

$= 70 \times \frac{80}{100} = 56$ litres

After the replacement, quanity of acid

$= 70 \times \frac{4}{7} = 40$ litres

This means, 56 – 40 = 16 litres of acid is removed from the original mixture.

Let x litres of mixture was removed and replaced by water, then 80% of x = 16

$\therefore$ Required part of mixture

$= \frac{20}{70} = \frac{2}{7}$

71. (2) Perimeter of rectangle

$= 2(l + b) = 18$ cm

$\Rightarrow l + b = 9$ cm

we have to find integrad values & of l and b for which $l + b = 9$

$\therefore$ $l = 1, b = 8$

$l = 1, b = 8$

$l = 3, b = 6$

$l = 4, b = 5$

$\therefore$ Required no. of distinct rectangle = 4

72. (2) Required no. of ways

= 6! = 720

73. (3) Probability of Horse P winning the race

$= \frac{1}{10} = 0.10$

Probability of Horse Q winning the race

$= \frac{3}{23} = 0.13$

Probability of Horse R winning the race

$= \frac{6}{20} = 0.30$

Probability of Horse S winning the race

$= \frac{2}{29} = 0.07$

$\therefore$ Probability of winning is higest for Horse R.

74. (4) Let cost cotton trousers be ₹ x and wollen trouser be ₹ y

$\therefore$ SP of cotton = ₹ $\frac{13x}{10}$

SP of woolen = ₹ $\frac{3y}{2}$

Earlier salesman sells 100 cotton and 200 woolen trousers.

$\therefore$ CP = $100x + 200y$

SP = $130x + 300y$

Since salesman gains profits of 45%

$\therefore$ SP = $(100x + 200y)\frac{145}{100} = 145x + 290y$

$= x = \frac{2}{3}y$ .....(i)

Now he sells 50% more cotton trousers than wollen trousers

Let he sells 300 cotton & 200 wollen trousers

$\therefore$ CP = $300x + 200y = 600x$ [from (i)]

SP = $390x + 300y = 840x$ [from (i)]

$\therefore$ Profit% = $\left(\frac{240x}{600} \times 100\right)\% = 40\%$

75. (4) (CI – SI) for 2yrs = ₹ 36

It means SI on 1st year sum = ₹ 36

$\therefore$ R = $\frac{36 \times 100}{360} = 10\%$

$\therefore$ P = $\frac{360 \times 100}{10 \times 1} =$ ₹ 3600

ATQ,

$\frac{3600 \times R \times R}{360} = 900$

R = 5%

(76-80) :

76. (5) I. $2x^2 + 17x + 26 = 0$
$\Rightarrow 2x^2 + 4x + 13x + 26 = 0$
$\Rightarrow 2x(x + 2) + 13(x + 2) = 0$
$\Rightarrow (2x + 13)(x + 2) = 0$
$\Rightarrow x = -\frac{13}{2}, -2$

II. $2y^2 + 17y + 33 = 0$
$\Rightarrow 2y^2 + 6y + 11y + 33 = 0$
$\Rightarrow 2y(y + 3) + 11(y + 3) = 0$
$\Rightarrow (2y + 11)(y + 3) = 0$
$\Rightarrow y = \frac{-11}{2}, -3$

77. (2) I. $x^2 = 81$
$\Rightarrow x = +9, -9$

II. $y^2 + 19y + 90 = 0$
$\Rightarrow y^2 + 9y + 10y + 90 = 0$
$\Rightarrow y(y + 9) + 10(y + 9) = 0$
$\Rightarrow (y + 10)(y + 9) = 0$
$\Rightarrow y = -10, -9$
Clearly, $x \geq y$

78. (5) I. $2x^2 - 21x + 45 = 0$
$\Rightarrow 2x^2 - 6x - 15x + 45 = 0$
$\Rightarrow 2x(x - 3) - 15(x - 3) = 0$
$\Rightarrow (2x - 15)(x - 3) = 0$
$\Rightarrow x = \frac{15}{2}, 3$

II. $y^2 - 11y + 28 = 0$
$\Rightarrow y^2 - 7y - 4y + 28 = 0$
$\Rightarrow y(y - 7) - 4(y - 7) = 0$
$\Rightarrow (y - 4)(y - 7) = 0$
$\Rightarrow y = 4, 7$

79. (5) I. $6x^2 - 29x - 35 = 0$
$\Rightarrow 6x^2 + 6x - 35x - 35 = 0$
$\Rightarrow 6x(x + 1) - 35(x + 1) = 0$
$\Rightarrow (6x - 35)(x + 1) = 0$
$\Rightarrow x = \frac{35}{6}, -1$

II. $2y^2 - 19y + 35 = 0$
$\Rightarrow 2y^2 - 14y - 5y + 35 = 0$
$\Rightarrow 2y(y - 7) - 5(y - 7) = 0$
$\Rightarrow (2y - 5)(y - 7) = 0$
$\Rightarrow y = \frac{5}{2}, 7$

80. (2) I. $12x^2 - 47x + 40 = 0$
$\Rightarrow 12x^2 - 32x - 15x + 40 = 0$
$\Rightarrow 4x(3x - 8) - 5(3x - 8) = 0$
$\Rightarrow (4x - 5)(3x - 8) = 0$
$\Rightarrow x = \frac{5}{4}, \frac{8}{3}$

II. $4y^2 + 3y - 10 = 0$
$\Rightarrow 4y^2 + 8y - 5y - 10 = 0$
$\Rightarrow 4y(y + 2) - 5(y + 2) = 0$
$\Rightarrow (4y - 5)(y + 2) = 0$
$\Rightarrow x = \frac{5}{4}, -2$

Clearly, $x \geq y$

IBPS RRB PO PHASE - I - 109 (ANSWER KEY)

1. (5)	21. (2)	41. (3)	61. (4)
2. (4)	22. (4)	42. (1)	62. (2)
3. (1)	23. (1)	43. (3)	63. (5)
4. (1)	24. (3)	44. (4)	64. (2)
5. (2)	25. (4)	45. (5)	65. (4)
6. (1)	26. (3)	46. (3)	66. (1)
7. (2)	27. (1)	47. (1)	67. (3)
8. (2)	28. (3)	48. (5)	68. (4)
9. (2)	29. (5)	49. (1)	69. (3)
10. (3)	30. (2)	50. (2)	70. (4)
11. (5)	31. (5)	51. (1)	71. (2)
12. (3)	32. (2)	52. (2)	72. (2)
13. (4)	33. (5)	53. (3)	73. (3)
14. (2)	34. (5)	54. (4)	74. (4)
15. (4)	35. (4)	55. (2)	75. (4)
16. (4)	36. (4)	56. (4)	76. (5)
17. (2)	37. (5)	57. (3)	77. (2)
18. (3)	38. (5)	58. (2)	78. (5)
19. (3)	39. (3)	59. (1)	79. (5)
20. (4)	40. (5)	60. (3)	80. (2)

Note:- If you face any problem regarding result or marks scored, please contact 9313111777

Note:- Whatapp with Mock Test No. and Question No. at 7053606571 for any of te doubts. Join the group and you may also share your suggestions and experience of sunday Mock Test.

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003