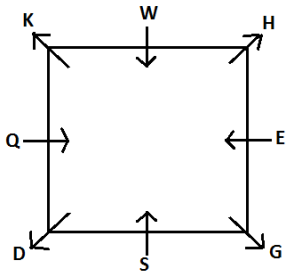
IBPS RRB Clerk Prelims 2020 (Solutions)

REASONING ABILITY

Directions (1-5):



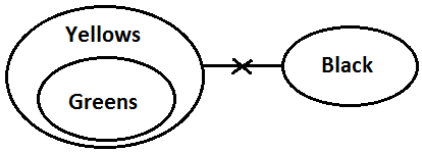
1. (b): 2. (d): 3. (c):
4. (b): 5. (a): 6. (c):
7. (d): 8. (a): 9. (b):

Directions (10-12):
C > E > A (86) > B > D

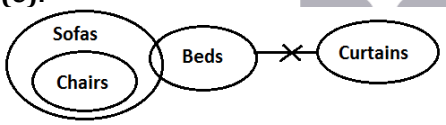
10. (d):
11. (a):
12. (c):

Directions (13-16):

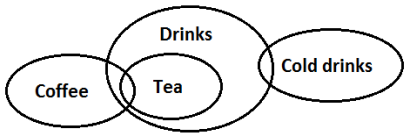
13. (a):



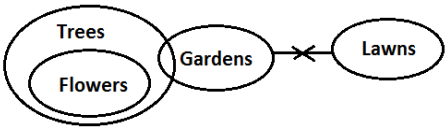
S14. (e):



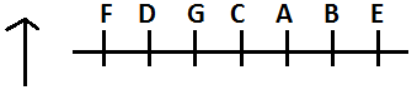
15. (d):



16. (b):



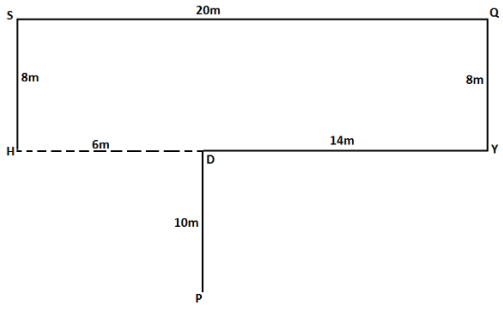
Directions (17-21):



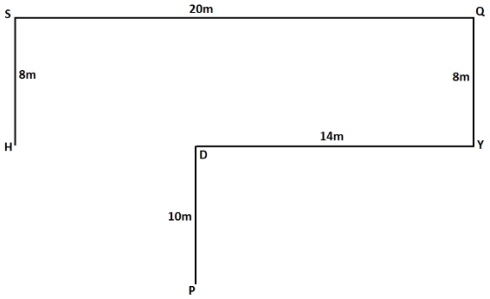
17. (b): 18. (c): 19. (d):
20. (b): 21. (c):

Directions (22-23):

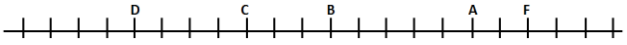
22. (b):



23. (c):

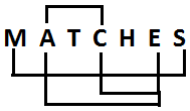


Directions (24-27):



24. (b): 25. (c): 26. (d):
27. (b):

28. (c):



Directions (29-33):

29. (c): 30. (b): 31. (a):
32. (d): 33. (c):

34. (c): 3 5 9 8 2 4 7 6
1 3 7 9 3 5 5 7

Directions (35-39):

Months	7th	12th
January	A	F
February	C	B
March	E	D

35. (c): 36. (b): 37. (b):
38. (c): 39. (b): 40. (a):

41. (b): Required percentage = $\frac{36-33}{36} \times 100$
$= \frac{3}{36} \times 100 = 8\frac{1}{3}\%$

42. (a): Required average = $\frac{36+27+33}{3} = 32$

43. (e): Required ratio = 18 : 22 = 9 : 11

44. (b): Total passenger in C and E = 27 + 33 = 60
Required percentage = $\frac{60-36}{36} \times 100$
$= \frac{24}{36} \times 100 = 66\frac{2}{3}\%$

45. (c): Required number of passengers = 18 + 27 + 22 = 67

46. (b): Pattern of series –
$12 \times 1 = 12$
$12 \times 2 = 24$
$24 \times 3 = 72$
$? = 72 \times 4 = 288$
$288 \times 5 = 1440$

47. (e): Pattern of series –
16 + 1.8 = 17.8
17.8 + 3.6 = 21.4
21.4 + 7.2 = 28.6
28.6 + 14.4 = 43
? = 43 + 28.8 = 71.8

48. (b): Pattern of series –
$12 \times 0.5 + 1 = 7$
$7 \times 1 + 1 = 8$
$8 \times 1.5 + 1 = 13$
$? = 13 \times 2 + 1 = 27$
$27 \times 2.5 + 1 = 68.5$

49. (d): Pattern of series –
72 + 7 = 79
79 – 14 = 65
65 + 28 = 93
? = 93 – 56 = 37
37 + 112 = 149

50. (b): Pattern of series –
$8 \times 1 + 1 = 9$
$9 \times 2 + 1 = 19$
$19 \times 3 + 1 = 58$
$58 \times 4 + 1 = 233$
$233 \times 5 + 1 = 1166$

51. (a): Let present age of Q = t years
So, present age of P = (t + 3) years
ATQ –
$\frac{t+2}{(t+3)+2} = \frac{4}{5}$
t = 10 years
So, Age of P after two years= (10 + 3) + 2 = 15 year

52. (c): Let total income of B = 100x Rs.
So, total income of A
$= 100x \times \left(1 + \frac{20}{100}\right) = 120x\ Rs.$
ATQ –
$(100x + 120x) \times \frac{30}{100} = 26400$
66x = 26400
x = 400 Rs.
So, income of B = $400 \times 100 = 40000\ Rs.$

53. (e): Let sum invested by man = Rs. X
And, rate of interest = r%
ATQ- $\frac{X \times r \times T}{X \times r \times (T+4)} = \frac{1}{2}$
$\frac{T}{(T+4)} = \frac{1}{2} \Rightarrow T = 4$

54. (d): Let total work = $12 \times 64 = 768$ units
Required women = $768 \times \frac{2}{3} \times \frac{1}{16} = 32$

55. (e): Let length of train be 'l' meters
ATQ –
$72 \times \frac{5}{18} = \frac{l}{30}$
l = 600 meters
Required time = $\frac{600}{54 \times \frac{5}{18}}$ = 40 sec

56. (a): ATQ –
$14 \times 6 - 10 \times T = 44$
10T = 40
T = 4

57. (c): Let cost price of article = 100x Rs.
So, marked price of article = $100x \times \left(1 + \frac{50}{100}\right) = 150x$ Rs.
And, selling price of article = (150x – 50) Rs.
ATQ –
(150x – 50) – 100x = 50
50x = 100
x = 2 Rs.
So, selling price of article = $(150 \times 2 - 50) = 250\ Rs.$

58. (e): ATQ –
$\frac{X}{(X+800)} = \frac{3200}{(6800-3200)}$
X = 6400

59. (b): Let total initial mixture in vessel = 4x
So, milk in vessel = 3x
And water in vessel = x
ATQ –
$\left(3x - 20 \times \frac{3x}{4x}\right) - \left(x - 20 \times \frac{x}{4x}\right) = 70$

$(3x - 15) - (x - 5) = 70$
$2x = 80$
$x = 40$
So, initial mixture in vessel = $4x = 4 \times 40 =$ 160 liters

60. (c): Let radius of circle be 'r' cm
ATQ –
$\frac{22}{7} \times r \times r = 616$
r = 14 cm = breath of rectangle
Let length of rectangle be 'l' cm
Perimeter of rectangle = circumference of a circle + 2
$2(14 + l) = 2 \times \frac{22}{7} \times 14 + 2$
$2(14 + l) = 90$
l = 31 cm

61. (d): Required difference = (80 + 100) – (70 + 90) = 20

62. (a): Total orders (all three items) received by R = (80 + 100 + 30) = 210
Total orders (all three items) received by Q = (40 + 70 + 90) = 200
Required percentage = $\frac{210-200}{200} \times 100 = 5\%$

63. (e): Total orders of item A & B received by P = 80 + 60 = 140
Total orders of item B & C received by Q = 70 + 90 = 160
Required ratio = 140 : 160 = 7 : 8

64. (b): Average number of orders of item B received by Q & R = $\frac{70+100}{2} = 85$
Required percentage = $\frac{85}{80} \times 100 = 106\frac{1}{4}\%$

65. (c): Required sum = 80 + 60 + 50 = 190

66. (e): $\frac{48}{100} \times 625 \times \frac{4}{3} = ? \Rightarrow ? = 400$

67. (c): $\frac{64+324}{97} = ?$
$? = 4$

68. (b): $4^? \times 2 = \frac{256}{2}$
$4^? = 64$
$4^? = (4)^3$
$? = 3$

69. (c): $4 \times ? = 512 - 480$
$? = \frac{32}{4}$
$? = 8$

70. (e): $? + 432 - 206 = 550$
$? = 550 - 226$
$? = 324$

71. (a): $(?)^2 = 196 - 96$
$?^2 = 100 \Rightarrow ? = 10$

72. (d): $\frac{40}{100} \times 400 + \frac{300}{100} \times ? = 250$
$160 + 3 \times ? = 250$
$? = \frac{90}{3} = 30$

73. (b): $\div 7 = ? - 180$
$? = 183$

74. (e): $24 - 12 + 27 = 36 + ?$
$?= 3$

75. (b): $119 + 41 + 9 = ?^2$
$? = 13$

76. (b): $\frac{12}{100} \times (? + 100) = 18$
$? = 150 - 100$
$? = 50$

77. (c): $\frac{11}{11} + 9 + ? = 27$
$1 + 9 + ? = 27$
$? = 17$

78. (b): $?^2 + 20 = 36$
$?^2 = 16 \Rightarrow ? = 4$

79. (d): $? = 9\frac{1}{3} + 7\frac{1}{2} - 5\frac{1}{6} - 6\frac{1}{3}$
$? = 9 + 7 - 5 - 6 \left(\frac{1}{3} + \frac{1}{2} - \frac{1}{6} - \frac{1}{3}\right)$
$? = 5\frac{1}{6}$

80. (c): $\frac{3^4 \times 3^{7\times 2}}{3^{6\times 3}} = 3^?$
$3^? = 3^{4+14-18}$
$3^? = 3^0$
$? = 0$