Quiz Date: 30th March 2020

Directions (1 - 5): Two equations I and II are given below in each question. You have to solve these equations and give answer
(a) if x<y
(b) if x>y
(c) if x≤y
(d) if x≥y
(e) if x=y or no relation can be established

Q1. **I.** $16x^2 - 88x + 117 = 0$
II. $25y^2 - 125y + 156 = 0$

Q2. **I.** $2x^2 + 11x - 195 = 0$
II. $3y^2 + 10y - 125 = 0$

Q3. **I.** $3x + 4y = 24$
II. $2y^2 - 13y + 21 = 0$

Q4. **I.** $x^2 + 17x + 52 = 0$
II. $y^2 + 27y + 182 = 0$

Q5. **I.** $3x + 7y = 25$
II. $7x + 6y = 48$

Directions (6 - 10): Find the term which do not follow the general pattern in the given number series.
Q6. 16, 10, 12, 20, 40, 107
(a) 16
(b) 10
(c) 20
(d) 40
(e) 107

Q7. 98, 119, 145, 185, 248, 359
(a) 119
(b) 145
(c) 359
(d) 185
(e) 98

Q8. 21, 19, 36, 101, 399, 1989
(a) 1989
(b) 399
(c) 36
(d) 19

(e) 21

Q9. 29, 74, 122, 163, 219, 250
(a) 29
(b) 74
(c) 179
(d) 277
(e) 122

Q10. 484, 240, 120, 57, 26.5, 11.25
(a) 120
(b) 26.5
(c) 240
(d) 57
(e) 11.25

Directions (11-15): Read the following information carefully and answer the questions given below it.
Five sports hockey, Cricket, Tennis, Badminton and Baseball are included in a sports Competition. The total number of players in this sports competition is 800. The ratio between the total woman and total man players is 1 : 3. Each player play only one sport.
25% players are in cricket out of total players, 110 players play Badminton, 10% of total players play tennis. Hockey players are two times of Badminton players, while remaining players play Baseball. 30% of cricket players are woman.
Half of woman cricketers are equal to woman badminton players. 10% of total Hockey players are equal to woman tennis players. Hockey and Baseball have equal woman players.

Q11. What is the ratio between the woman hockey players and man badminton players?
(a) 20 : 13
(b) 11 : 20
(c) 13 : 20
(d) 11 : 23
(e) None of these

Q12. What is the total number of man players in hockey, cricket and baseball?
(a) 464
(b) 454

(c) 462
(d) 432
(e) None of these

Q13. Woman baseball players are what percent of man hockey players?
(a) 25%
(b) 34%
(c) 24%
(d) 15%
(e) None of these

Q14. What is the difference between the man baseball players and woman tennis players?
(a) 134
(b) 136
(c) 122
(d) 126
(e) None of these

Q15. In which sports, women are maximum, and men are minimum?
(a) Cricket and badminton
(b) Cricket and hockey
(c) Baseball and cricket
(d) Cricket and Tennis
(e) Tennis and Hockey

Solutions

S1. Ans.(e)
Sol.
I. $16x^2 - 88x + 117 = 0$
$16x^2 - 36x - 52x + 117 = 0$
$4x(4x - 9) - 13(4x - 9) = 0$
$x = \frac{13}{4}, \frac{9}{4}$
II. $25y^2 - 125y + 156 = 0$
$25y^2 - 65y - 60y + 156 = 0$
$5y(5y - 13) - 12(5y - 13) = 0$
$y = \frac{12}{5}, \frac{13}{5}$
∴ Relation cannot be established

S2. Ans.(e)
Sol.
I. $2x^2 + 11x - 195 = 0$
$2x^2 + 26x - 15x - 195 = 0$
$2x(x + 13) - 15(x + 13) = 0$

$x = -13, \frac{15}{2}$

II. $3y^2 + 10y - 125 = 0$

$3y^2 + 25y - 15y - 125 = 0$

$y(3y + 25) - 5(3y + 25) = 0$

$y = -\frac{25}{3}, 5$

∴ Relation cannot be established.

S3. Ans.(e)

Sol.

II. $2y^2 - 13y + 21 = 0$

$2y^2 - 6y - 7y + 21 = 0$

$2y(y - 3) - 7(y - 3) = 0$

$y = 3, \frac{7}{2}$

Putting these value in (i)

$y = 3$

$3x + 4(3) = 24$

$x = 4$

$x > y$

$y = \frac{7}{2}$

$3x + 4 \times \left(\frac{7}{2}\right) = 24$

$x = \frac{10}{3}$

$y > x$

∴ No relation can be established

S4. Ans.(d)

Sol.

$x^2 + 17x + 52 = 0$

$x^2 + 13x + 4x + 52 = 0$

$x(x + 13) + 4(x + 13) = 0$

$x = -4, -13$

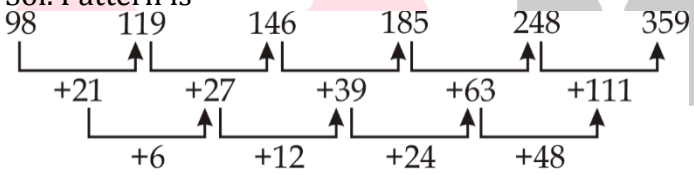
II. $y^2 + 27y + 182 = 0$

$y^2 + 14y + 13y + 182 = 0$
$y(y + 14) + 13(y + 14) = 0$
$y = -14, -13$
$x \geq y$

S5. Ans.(b)
Sol.
I. $3x + 7y = 25$
II. $7x + 6y = 48$
Solving (i) & (ii)
$x = 6, y = 1$
$x > y$

S6. Ans.(d)
Sol. Pattern is
$16 \times \frac{1}{2} + 2 = 10$
$10 \times 1 + 2 = 12$
$12 \times \frac{3}{2} + 2 = 20$
$20 \times 2 + 2 = 42 \neq 40$
$42 \times \frac{5}{2} + 2 = 107$

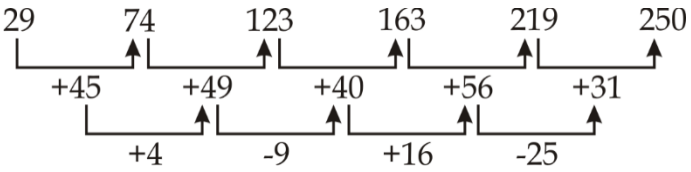
S7. Ans.(b)
Sol. Pattern is



∴ 145 is wrong

S8. Ans.(c)
Sol. Pattern is
$21 \times 1 - 2 = 19$
$19 \times 2 - 3 = 35 \neq 36$
$35 \times 3 - 4 = 101$
$101 \times 4 - 5 = 399$
$399 \times 5 - 6 = 1989$
∴ 36 is wrong

S9. Ans.(e)
Sol. Pattern is



∴ 122 is wrong

S10. Ans.(a)
Sol. Pattern is
484 ÷ 2 – 2 = 240
240 ÷ 2 – 2 = 118 ≠ 120
118 ÷ 2 – 2 = 57
57 ÷ 2 – 2 = 26.5
26 ÷ 2 – 2 = 11.25
∴ 120 is wrong

S (11-15):
Total number of players = 800
Number of woman players $= \frac{1}{4} \times 800 = 200$
Number of man players $= \frac{3}{4} \times 800 = 600$
Number of cricket players = 25% of 800 = 200
Number of badminton players = 110
Number of tennis players = 10% of 800 = 80
Number of baseball players = 800 – (200 + 110 + 80 + 220) = 800 – 610 = 190
Number of woman cricket players = 30% of 200 = 60
∴ Number of man cricket players = 200 – 60 = 140
Number of woman badminton players $= \frac{1}{2} \times 60 = 30$
∴ Number of man badminton players = 110 – 30 = 80
Number of woman tennis players = 10% of 220 = 22
∴ Number of man tennis players = 80 – 22 = 58
Number of woman hockey players = Number of woman baseball players
$= \frac{1}{2}\left[200 - (60 + 30 + 22) = \frac{1}{2}[200 - 112] = \frac{88}{2}\right] = 44$
∴ Number of man hockey players = 220 –44 = 176
And number of man baseball players = 190 – 44= 146
Tabular form of above information is as follows

Games	Number of Man players	Number of woman players
Cricket	140	60
Badminton	80	30
Tennis	58	22
Hockey	176	44
Baseball	146	44
Total	**600**	**200**

S11. Ans.(b)
Sol. From the table, number of woman hockey players = 44
Number of man badminton players = 80
∴ Required ratio = 44 : 80 = 11 : 20

S12. Ans.(c)
Sol. From the table, it is clear that the total number of man players in hockey, cricket and baseball = 176 + 140 + 146 = 462

S13. Ans.(a)
Sol. Number of woman baseball players = 44
Number of man hockey players = 176
∴ Required percentage $= \frac{44}{176} \times 100\% = 25\%$

S14. Ans.(e)
Sol. Number of man baseball players = 146
Number of woman tennis players = 22
∴ Required difference = 146 – 22 = 124

S15. Ans.(d)
Sol. From the table, it is clear that women are maximum in cricket and men are minimum in tennis.