

Quiz Date: 10th August 2020

Direction (1-5): Data given below shows total number of students in three schools i.e, A, B and C.

Total number of students in school A, B and C are 800, 1200 and 900 respectively

p_1, p_2, p_3 are the number of boys in school A, B and C respectively

q_1, q_2, q_3 are the number of girls in school A, B and C respectively

Total number of mentors in school A \rightarrow 20% of boys in school A

Total number of mentors in school B \rightarrow 30% of girls in school B

Total number of mentors in school C \rightarrow 10% of boys in school C

$p_1 : q_1 \rightarrow 3 : 1$

$p_2 : q_2 \rightarrow 5 : 3$

$p_3 : q_3 \rightarrow 2 : 1$

Q1.Total number of boys in school 'B' is what percent more than total number of girls in school 'C'?

- (a) 25%
- (b) 150%
- (c) 125%
- (d) 250%
- (e) 60%

Q2.Total number of boys in school 'A' is how much more than total number of girls in school 'B'?

- (a) 200
- (b) 100
- (c) 250
- (d) 300
- (e) 150

Q3.Number of mentors in school 'B' is what percent of number of mentors in school 'C'.

- (a) 225%
- (b) 125%
- (c) 100%
- (d) 200%
- (e) 250%

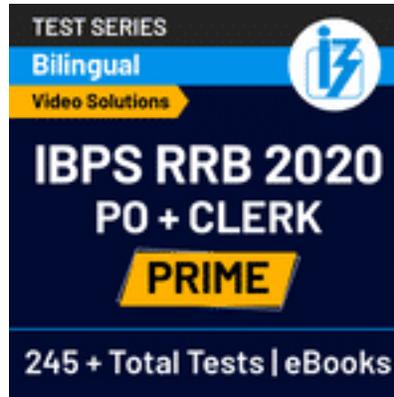
Q4.In school 'D', total number of girls is 25% more than girls in school 'A' while total number of boys is 40% less than number of boys in school 'B'. Find total number of students in school 'D'.

- (a) 600
- (b) 1380

- (c) 700
 (d) 1020
 (e) 1300

Q5. Find the ratio between total number of girls in school 'B' to total number of boys in school 'C'.

- (a) 4 : 5
 (b) 4 : 3
 (c) 5 : 4
 (d) 3 : 4
 (e) 1 : 2



Direction (6 – 10): Read the data carefully and answer the questions.

Each of two electronic stores A & B sold five items i.e. mobile, laptop, AC, fan & printer. Total number of items sold by both the store is 4200 and ratio between total items sold by store A & store B is 3 : 4. Total mobile sold by store A is $16\frac{2}{3}\%$ more than total fan sold by that store, while total AC sold by store A is 80 less than total fan sold by store A. Total laptop sold by store A is $77\frac{7}{9}\%$ more than total fan sold by store A and total printer sold by store A is 540 less than total laptop sold by store A. Total fan sold by store B is 120 more than total fan sold by store A, while total laptop sold by store B is $12\frac{1}{2}\%$ more than total laptop sold by store A. Ratio of total mobile, AC & printer sold by store B is 26 : 23 : 11 respectively.

Q6. Total laptop sold by store B is what percent less than total mobile & fan together sold by store A?

- (a) $5\frac{9}{13}\%$
 (b) $7\frac{9}{13}\%$
 (c) $9\frac{9}{13}\%$
 (d) $11\frac{9}{13}\%$
 (e) $13\frac{9}{13}\%$

Q7. Find average number of fan sold by store A & B?

- (a) 480

- (b) 400
- (c) 440
- (d) 420
- (e) 520

Q8. Find difference between total number of laptop, AC & printer sold by store A and same items together sold by store B?

- (a) 360
- (b) 320
- (c) 380
- (d) 300
- (e) 400

Q9. Total printer sold by store B is what percent more than that of total printer sold by store A?

- (a) 75%
- (b) 115%
- (c) 125%
- (d) 120%
- (e) 130%

Q10. Find the ratio between total laptop & fan sold by store A to total mobile & fan sold by store B?

- (a) 2 : 1
- (b) 3 : 1
- (c) 4 : 1
- (d) 1 : 1
- (e) 2 : 3

Directions (11-15): Read the given information carefully and answer the following questions.

The number of male passengers who boarded Delhi-Bangalore Rajdhani express is 175% of the number of female passengers who boarded the same train. The ratio of the number of passengers who like Tea, Coffee and Lassi is 61 : 67 : 37. Each passenger likes only one item out of three.

The number of male passengers who like Tea is $28\frac{4}{7}\%$ more than the male passengers who like Coffee. Ratio of the number of male passengers who like Lassi and the male passengers who like Tea is 5:9. Number of female passengers who like Coffee is 320 and is $53\frac{1}{3}\%$ of the number of total female passengers. The ratio of number of female passengers who like Tea and Lassi is 4 : 3.

Q11. Find the difference between the male passengers who like Lassi and female passengers who like Tea.

- (a) 100
- (b) 90
- (c) 80
- (d) 70
- (e) 60

Q12. The number of female passengers who like Tea and Lassi together is how much percent more or less than the number of male passengers who like coffee?

- (a) 20%
- (b) 25%
- (c) 40%
- (d) 30%
- (e) $22\frac{1}{2}\%$

Q13. Find the average of the number of passengers who like Tea and Coffee together?

- (a) 620
- (b) 630
- (c) 640
- (d) 650
- (e) 660

Q14. Find the ratio of the total passengers who like Tea and Lassi together to the total number of male passengers?

- (a) 12 : 13
- (b) 4 : 5
- (c) 14 : 15
- (d) 2 : 3
- (e) 7 : 8

Q15. Total number of male passengers who like Coffee and female passengers who like Tea together are what percent of the total number of passengers?

- (a) $31\frac{10}{11}\%$
- (b) $30\frac{10}{11}\%$
- (c) $33\frac{1}{11}\%$
- (d) $35\frac{2}{11}\%$
- (e) $30\frac{1}{11}\%$

Solutions

Sol (1-5)

$$\text{Total number of boys in school A} = \frac{3}{4} \times 800 = 600$$

$$\text{Total number of girls in school A} = \frac{1}{4} \times 800 = 200$$

$$\text{Total number of boys in school B} = \frac{5}{8} \times 1200 = 750$$

$$\text{Total number of girls in school B} = \frac{3}{8} \times 1200 = 450$$

$$\text{Total number of boys in school C} = \frac{2}{3} \times 900 = 600$$

$$\text{Total number of girls in school C} = \frac{1}{3} \times 900 = 300$$

$$\text{Total number of mentors in school A} = \frac{20}{100} \times 600 = 120$$

$$\text{Total number of mentors in school B} = \frac{30}{100} \times 450 = 135$$

$$\text{Total number of mentors in School C} = \frac{10}{100} \times 600 = 60$$

S1. Ans.(b)

Sol.

$$\text{Total number of boys in school B} = \frac{5}{8} \times 1200 = 750$$

$$\text{Total number of girls in school C} = \frac{1}{3} \times 900 = 300$$

$$\text{Required \%} = \frac{750-300}{300} \times 100 = 150\%$$

S2. Ans.(e)

Sol.

$$\text{Required difference} = 600 - 450 = 150$$

S3. Ans.(a)

Sol.

$$\text{Required \%} = \frac{135}{60} \times 100 = 225\%$$



S4. Ans.(c)

Sol.

$$\text{Total number of girls in school 'D'} = \frac{125}{100} \times 200 = 250$$

$$\text{Total number of boys in school 'D'} = \frac{60}{100} \times 750 = 450$$

$$\text{Total number of students in school 'D'} = 250 + 450 = 700$$

S5. Ans.(d)

Sol.

$$\text{Required ratio} = \frac{450}{600} = \frac{3}{4}$$

S(6 - 10):

$$\text{Total items sold by store A} = 4200 \times \frac{3}{7} = 1800$$

$$\text{Total items sold by store B} = 4200 \times \frac{4}{7} = 2400$$

Let total fan sold by store A = x

$$\text{So, total mobile sold by store A} = \frac{7x}{6}$$

$$\text{Total AC sold by store A} = (x - 80)$$

$$\begin{aligned} \text{Total laptop sold by store A} &= x + x \times \frac{7}{9} \\ &= \frac{16x}{9} \end{aligned}$$

$$\text{Total printer sold by store A} = \frac{16x}{9} - 540$$

ATQ -

$$x + \frac{7x}{6} + (x - 80) + \frac{16x}{9} + \left(\frac{16x}{9} - 540\right) = 1800$$

$$\frac{18x + 21x + 18x - 1440 + 32x + 32x - 9720}{18} = 1800$$

$$121x - 11160 = 32400$$

$$121x = 43560$$

$$x = 360$$

$$\text{Total mobile sold by store A} = 360 \times \frac{7}{6} = 420$$

$$\text{Total AC sold by store A} = (360 - 80) = 280$$

$$\text{Total laptop sold by store A} = 360 \times \frac{16}{9} = 640$$

$$\text{Total printer sold by store A} = 640 - 540 = 100$$

$$\text{Total fan sold by store B} = 360 + 120 = 480$$

$$\text{Total laptop sold by store B} = 640 \times \frac{9}{8} = 720$$

Let total mobile, AC & printer sold by store B is 26y, 23y and 11y respectively

$$26y + 23y + 11y = (2400 - 480 - 720)$$

$$60y = 1200$$

$$y = 20$$

$$\text{Total mobile sold by store B} = 26 \times 20 = 520$$

$$\text{Total AC sold by store B} = 23 \times 20 = 460$$

$$\text{Total printer sold by store B} = 11 \times 20 = 220$$

Items	Store 'A'	Store 'B'
Mobile	420	520
Laptop	640	720
AC	280	460

Fan	360	480
Printer	100	220
Total	1800	2400

S6. Ans(b)

Sol

Total mobile & fan sold by store A = 420 + 360 = 780

$$\begin{aligned} \text{Required percentage} &= \frac{780-720}{780} \times 100 \\ &= \frac{60}{780} \times 100 \\ &= 7 \frac{9}{13} \% \end{aligned}$$

S7. Ans(d)

Sol.

$$\begin{aligned} \text{Required average} &= \frac{360+480}{2} \\ &= \frac{840}{2} = 420 \end{aligned}$$

S8. Ans(c)

Sol.

Total number of laptop, AC & printer sold by store A = 640 + 280 + 100 = 1020

Total number of laptop, AC & printer sold by store B = 720 + 460 + 220 = 1400

Required difference = 1400 - 1020 = 380

S9. Ans(d)

Sol.

$$\text{Required percentage} = \frac{220-100}{100} \times 100 = 120\%$$

S10. Ans(d)

Sol.

Total laptop & fan sold by store A = 640 + 360 = 1000

Total mobile & fan sold by store B = 520 + 480 = 1000

$$\begin{aligned} \text{Required ratio} &= \frac{1000}{1000} \\ &= 1 : 1 \end{aligned}$$

S (11-15):

Let the number of female passengers be 100x.

Then, the number of male passengers

$$= 100x \times \frac{175}{100} = 175x$$

The number of female passengers who like Coffee

$$100x \times \frac{160}{3 \times 100} = 320$$

$$x = 6$$

Number of total female passengers = $6 \times 100 = 600$

Number of total male passengers = $175 \times 6 = 1050$

Number of passengers who like Tea

$$= \frac{1650 \times 61}{165} = 610$$

Number of passengers who like coffee

$$= \frac{1650 \times 67}{165} = 670$$

Number of passengers who like Lassi = $1650 - (610 + 670) = 370$

Number of female who like Tea = $(600 - 320) \times \frac{4}{7} = 160$

Number of male who like Lassi = $600 - (320 + 160) = 120$

Let the number of male passengers who like coffee be $7y$

Then, number of male passengers who like tea

$$= 7y \times \frac{9}{7} = 9y$$

Number of male passengers who like Lassi

$$= \frac{9y}{9} \times 5 = 5y$$

ATQ,

$$7y + 9y + 5y = 1050$$

$$y = 50$$

Passengers	Tea	Coffee	Lassi	Total
Male	450	350	250	1050
Female	160	320	120	600
Total	610	670	370	1650

S11. Ans.(b)

Sol.

$$\text{Required difference} = 250 - 160 = 90$$

S12. Ans.(a)

Sol.

Total no. of female passengers who like Tea and Lassi together = $160 + 120 = 280$

$$\text{Required \%} = \frac{350 - 280}{350} \times 100 = 20\%$$

S13. Ans.(c)

Sol.

$$\text{Required avg.} = \frac{610 + 670}{2} = \frac{1280}{2} = 640$$

S14. Ans.(c)

Sol.

$$\text{Required ratio} = \frac{610 + 370}{1050} = \frac{980}{1050} = \frac{14}{15}$$

S15. Ans.(b)

Sol.

$$\begin{aligned}\text{Required\%} &= \frac{350+160}{1650} \times 100 \\ &= \frac{510}{1650} \times 100\% \\ &= 30\frac{10}{11}\%\end{aligned}$$

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