

**Pre-examination training for SC/ST/OBC candidates under Regular Recruitment
Drive for Junior Associates**

Quantitative Aptitude Set-03

Directions (Q1–Q6)

Study the following data carefully and answer the questions.

The table shows the **total population (males + females)** of four cities in 2023 and 2024.

City	2023	2024
A	320	480
B	400	700
C	650	560
D	680	390

Q1.

The ratio of males to females in city A in 2023 is **5:3**. The number of females in city A in 2024 is 1.5 times the number of females in 2023. Find the difference between the number of males in city A in 2023 and 2024.

- (a) 83
- (b) 108
- (c) 93
- (d) 100
- (e) 89

Answer: (d) 100

Solution:

Males in A in 2023 = $320 \times \frac{5}{8} = 200$
Females in 2023 = $320 - 200 = 120$
Females in 2024 = $120 \times 1.5 = 180$
Males in 2024 = $480 - 180 = 300$
Required difference = $300 - 200 = \mathbf{100}$

Q2.

The population of city T in 2023 is 30% more than that of city B in 2023. If the total population of city T in 2023 and 2024 together is 1150, find its population in 2024.

- (a) 726
- (b) 673
- (c) 534
- (d) 630
- (e) 577

Answer: (d) 630

Solution:

Population of T in 2023 = $400 \times 130/100 = 520$

Population of T in 2024 = $1150 - 520 = 630$

Q3.

The population of city B in 2022 was 25% less than the average population of cities A and C in 2024. Find the ratio of the population of B in 2022 to that of D in 2023.

(a) 37:68

(b) 39:68

(c) 41:65

(d) 35:62

(e) 39:70

Answer: (b) 39:68

Solution:

Average population of A and C in 2024 = $(480 + 560)/2 = 520$

B's population in 2022 = 75% of 520 = 390

Required ratio = $390 : 680 = 39 : 68$

Q4.

The number of males in city D in 2023 is 45% of the total population of city B in 2024. The number of males in D in 2024 is two-fifth of the number of males in D in 2023. Find the total number of females in D in 2023 and 2024 together.

(a) 629

(b) 532

(c) 666

(d) 753

(e) 713

Answer: (a) 629

Solution:

Males in D in 2023 = 45% of 700 = 315

Females in D in 2023 = $680 - 315 = 365$

Males in D in 2024 = $315 \times 2/5 = 126$

Females in D in 2024 = $390 - 126 = 264$

Required total = $365 + 264 = 629$

Q5.

The population of city C in 2021 was 65% of the population of city A in 2023. If 25% of the population of C in 2021 were males, find the number of females as a percentage of the population of city D in 2024.

- (a) 51%
- (b) 40%
- (c) 29%
- (d) 34%
- (e) 47%

Answer: (b) 40%

Solution:

Population of C in 2021 = 65% of 320 = 208

Males = 25% of 208 = 52

Females = 208 – 52 = 156

Required percentage = $156/390 \times 100 = 40\%$

Q6.

7/8 of the population of city D in 2023 are literate, while 3/5 of the population of city B in 2023 are illiterate. Find the difference between the total literate population of B and D together and the total illiterate population of B and D together.

- (a) 430
- (b) 468
- (c) 490
- (d) 390
- (e) 514

Answer: (a) 430

Solution:

Literate in D = $680 \times 7/8 = 595$

Illiterate in D = $680 - 595 = 85$

Illiterate in B = $400 \times 3/5 = 240$

Literate in B = $400 - 240 = 160$

Total literates = $595 + 160 = 755$

Total illiterates = $85 + 240 = 325$

Difference = $755 - 325 = 430$

Directions (Q7–Q10)

Read the following information carefully.

There are **339 students** in three colleges P, Q and R.

- Number of girls in Q = 50.

- Boys in P are 60% of girls in Q.
- Girls in P are 12 more than girls in Q.
- Girls in R are 1.8 times the girls in Q.
- Girls in R are 3 times the boys in R.
- Boys in Q are 15 more than girls in P.

From the information:

College	Boys	Girls	Total
P	30	62	92
Q	77	50	127
R	30	90	120
Total	137	202	339

Q7.

Find the difference between boys in P and Q together and girls in Q and R together.

- (a) 45
- (b) 37
- (c) 20
- (d) 41
- (e) 33

Answer: (e) 33

Solution:

$$\text{Boys in P + Q} = 30 + 77 = 107$$

$$\text{Girls in Q + R} = 50 + 90 = 140$$

$$\text{Difference} = 33$$

Q8.

Boys in college P are what percentage of the total students in college R?

- (a) 19%
- (b) 38%
- (c) 34%
- (d) 25%
- (e) 30%

Answer: (d) 25%

Solution:

$$\text{Required percentage} = 30/120 \times 100 = 25\%$$

Q9.

Find the ratio of girls in P to boys in R.

- (a) 29:15
- (b) 31:15
- (c) 33:14
- (d) 27:13
- (e) 31:17

Answer: (b) 31:15

Solution:

Girls in P : Boys in R = 62 : 30 = **31 : 15**

Q10.

The total number of students in college S is 25% more than the total number of students in college P. The ratio of boys in R to boys in S is 3:5. Find the number of girls in S.

- (a) 51
- (b) 68
- (c) 65
- (d) 78
- (e) 72

Answer: (c) 65

Solution:

Students in S = 125% of 92 = 115

Boys in R = 30

Boys R : Boys S = 3:5

Boys in S = $30 \times \frac{5}{3} = 50$

Girls in S = 115 - 50 = **65**

Q11. Mixture

The ratio of milk to water in Jar A is **9:4**, while the ratio in Jar B is **5:6**. The quantity of water in Jar B is 4 litres more than the quantity of water in Jar A. After mixing both jars, the total quantity of milk exceeds the total quantity of water by 34 litres. Find the quantity of water in the final mixture.

- (a) 78 litres
- (b) 58 litres
- (c) 68 litres
- (d) 73 litres
- (e) 63 litres

Answer: (c) 68 litres

Solution:

Let Jar A contain:

Milk = $9x$, Water = $4x$

Jar B:

Milk = $5y$, Water = $6y$

Given:

$$6y - 4x = 4 \dots\dots(1)$$

Also, total milk – total water = 34

$$(9x + 5y) - (4x + 6y) = 34$$

$$5x - y = 34 \dots\dots(2)$$

From (1): $3y = 2x + 2$, i.e. $y = (2x + 2)/3$

Substituting in (2): $5x - (2x + 2)/3 = 34 \rightarrow 15x - 2x - 2 = 102 \rightarrow 13x = 104 \rightarrow x = 8$

$$y = (16 + 2)/3 = 6$$

Water in Jar A = $4 \times 8 = 32$ litres

Water in Jar B = $6 \times 6 = 36$ litres

Total water = $32 + 36 = \mathbf{68}$ litres

Directions (Q12–Q14)

Solve both equations and establish the relationship between x and y .

(a) $x > y$

(b) $x \geq y$

(c) $x < y$

(d) $x \leq y$

(e) $x = y$ or no relation can be established

Q12.

I. $2x^2 - 11x + 5 = 0$

II. $y^2 - 4y + 3 = 0$

Answer: (e) No relation

Solution:

I. $2x^2 - 11x + 5 = 0$

$$(2x - 1)(x - 5) = 0$$

$$x = 1/2, 5$$

II. $y^2 - 4y + 3 = 0$

$$(y - 1)(y - 3) = 0$$

$$y = 1, 3$$

Since some values of x are greater than y while others are smaller: **No definite relationship.**

Q13.

I. $x^2 - 14x + 48 = 0$

II. $y^2 - 5y + 6 = 0$

Answer: (a) $x > y$

Solution:

I. $(x - 6)(x - 8) = 0$

$x = 6, 8$

II. $(y - 2)(y - 3) = 0$

$y = 2, 3$

Every possible value of x is greater than every possible value of y .
Therefore, $x > y$.

Q14.

I. $x^2 - x - 12 = 0$

II. $y^2 - 11y + 28 = 0$

Answer: (d) $x \leq y$

Solution:

I. $(x + 3)(x - 4) = 0$

$x = -3, 4$

II. $(y - 4)(y - 7) = 0$

$y = 4, 7$

Every possible value of x is less than or equal to every possible value of y .
Therefore: $x \leq y$

Directions (Q15-Q18)

Find the approximate value of the question mark (?).

Q15.

$34.90\% \text{ of } 179.80 + 45.10\% \text{ of } 220.15 - 59.85 = ?$

(a) 94

(b) 84

(c) 102

(d) 98

(e) 120

Answer: (c) 102

Solution:

Approximate:

$$\begin{aligned} & 35\% \text{ of } 180 + 45\% \text{ of } 220 - 60 \\ &= 63 + 99 - 60 \\ &= \mathbf{102} \end{aligned}$$

Q16.

$$76.10 \div 8.02 \times 9.90 + 250.20 = ?^2 + 10.10 \times 11.90$$

- (a) 30
- (b) 7
- (c) 4
- (d) 26
- (e) 15

Answer: (e) 15

Solution:

$$\text{Approximate: } 76 \div 8 \times 10 + 250 = 9.5 \times 10 + 250 = 95 + 250 = 345$$

$$\text{And, } 10 \times 12 = 120$$

$$\text{Therefore, } ?^2 \approx 345 - 120 = 225$$

$$? \approx \sqrt{225} = \mathbf{15}$$

Q17.

$$?\% \text{ of } (750.30 - 150.20 - 100.40 - 99.70) = 120.40$$

- (a) 24
- (b) 16
- (c) 20
- (d) 30
- (e) 40

Answer: (d) 30

Solution:

$$\text{Approximate expression: } 750 - 150 - 100 - 100 = 400$$

$$\text{So, } ?\% \text{ of } 400 = 120$$

$$?/100 \times 400 = 120$$

$$? = \mathbf{30}$$

Q18.

$$(? - 500.20) - 35.30\% \text{ of } (1800.40 \div 17.98) = 20.30 \times 15.20 \div 76.40$$

- (a) 622
- (b) 486
- (c) 539

- (d) 585
(e) 459

Answer: (c) 539

Solution:

Approximate: $1800 \div 18 = 100$

35% of 100 = 35

Right side: $20 \times 15 \div 75 = 4$

Therefore, $? - 500 - 35 = 4$

? = 539

Directions (Q19–Q24)

The following table shows the **average number of students visiting Schools A and B** on five different days.

Day	Average of A & B
Monday	38
Tuesday	47
Wednesday	68
Thursday	40
Friday	58

Additional information:

- On Monday, students visiting from School B are **20 more** than those from A.
- The ratio of students visiting from B from Monday to Friday is **6:3:5:2:7**.

Basic Calculation

Since average = $(A+B)/2$:

Day	A+B	A	B
Monday	76	28	48
Tuesday	94	70	24
Wednesday	136	96	40
Thursday	80	64	16
Friday	116	60	56

Q19.

On Monday, the ratio of boys to girls visiting from A is 5:2. The number of boys visiting from B on Friday is equal to the number of girls visiting from A on Monday. Find the girls visiting from B on Friday as a percentage of the students visiting from A on Wednesday.

- (a) 62%
- (b) 39%
- (c) 50%
- (d) 44%
- (e) 58%

Answer: (c) 50%

Solution:

A students on Monday = 28

Boys : Girls = 5:2

Girls from A = $28 \times \frac{2}{7} = 8$

Therefore, boys from B on Friday = 8.

Total students from B on Friday = 56.

Girls from B on Friday = $56 - 8 = 48$

Required percentage = $\frac{48}{96} \times 100 = 50\%$

Q20.

The total number of students in School C is 20% more than the average number of students visiting from B on Monday, Thursday and Friday. The ratio of total students in C to D is 3:4. Find the number of students in D.

- (a) 74
- (b) 49
- (c) 55
- (d) 67
- (e) 64

Answer: (e) 64

Solution:

Average B students = $(48 + 16 + 56)/3 = 120/3 = 40$

Students in C = $120\% \times 40 = 48$

C : D = 3 : 4

D = $48 \times \frac{4}{3} = 64$

Q21.

Find the average number of students visiting from School B on all five days.

- (a) 36.8
- (b) 39.8
- (c) 38.5
- (d) 32.9
- (e) 33.9

Answer: (a) 36.8

Solution:

Total B students = $48 + 24 + 40 + 16 + 56 = 184$

Average = $184/5 = 36.8$

Q22.

Students from A visiting on Wednesday participated in two activities — drama and music — in the ratio 5:3. Find the difference between students participating in music and the total number of students visiting from both schools on Thursday.

- (a) 52
- (b) 55
- (c) 44
- (d) 49
- (e) 58

Answer: (c) 44

Solution:

A students on Wednesday = 96.

Drama : Music = 5 : 3

Music participants = $96 \times 3/8 = 36$

Total A+B students on Thursday = 80

Required difference = $80 - 36 = 44$

Q23.

The number of students visiting from A on Tuesday is what percentage more than the students visiting from B on Friday?

- (a) 25%
- (b) 38%
- (c) 31%
- (d) 21%
- (e) 12%

Answer: (a) 25%

Solution:

A on Tuesday = 70

B on Friday = 56

Difference = 14

Required percentage = $14/56 \times 100 = 25\%$

Q24.

On a particular week, 25% of the students scheduled to visit from A on Monday did not visit, while 40% of those scheduled from B on Wednesday did not visit. Find the total number of students who did not visit.

- (a) 23
- (b) 26
- (c) 10
- (d) 35
- (e) 18

Answer: (a) 23

Solution:

A on Monday = 28.

Non-visitors = 25% of 28 = 7

B on Wednesday = 40.

Non-visitors = 40% of 40 = 16

Total non-visitors = 7 + 16 = **23**

Directions (Q25–Q30)

Study the following data carefully and answer the questions.

The table shows the total population (males + females) of four cities in 2023 and 2024.

City	2023	2024
E	360	630
F	500	800
G	480	570
H	910	360

Q25.

The ratio of males to females in city E in 2023 is 7:5. The number of females in city E in 2024 is 1.4 times the number of females in 2023. Find the difference between the number of males in city E in 2023 and 2024.

- (a) 198
- (b) 173
- (c) 210
- (d) 243
- (e) 226

Answer: (c) 210

Solution:

Males in E in 2023 = $360 \times 7/12 = 210$
Females in 2023 = $360 - 210 = 150$
Females in 2024 = $150 \times 7/5 = 210$
Males in 2024 = $630 - 210 = 420$
Required difference = $420 - 210 = 210$

Q26.

The population of city N in 2023 is 35% more than that of city F in 2023. If the total population of city N in 2023 and 2024 together is 1500, find its population in 2024.

- (a) 739
- (b) 825
- (c) 871
- (d) 792
- (e) 946

Answer: (b) 825

Solution:

Population of N in 2023 = $500 \times 135/100 = 675$
Population of N in 2024 = $1500 - 675 = 825$

Q27.

The population of city F in 2022 was 30% less than the average population of cities E and G in 2024. Find the ratio of the population of F in 2022 to that of H in 2023.

- (a) 7:13
- (b) 6:13
- (c) 6:11
- (d) 5:13
- (e) 8:15

Answer: (b) 6:13

Solution:

Average population of E and G in 2024 = $(630 + 570)/2 = 600$
F's population in 2022 = 70% of 600 = 420
Required ratio = $420 : 910 = 6 : 13$

Q28.

The number of males in city H in 2023 is 40% of the total population of city F in 2024. The number of males in H in 2024 is three-fourth of the number of males in H in 2023. Find the total number of females in H in 2023 and 2024 together.

- (a) 748
- (b) 710

- (c) 574
- (d) 669
- (e) 797

Answer: (b) 710

Solution:

Males in H in 2023 = 40% of 800 = 320
Females in H in 2023 = 910 – 320 = 590
Males in H in 2024 = $320 \times \frac{3}{4} = 240$
Females in H in 2024 = 360 – 240 = 120
Required total = 590 + 120 = 710

Q29.

The population of city G in 2021 was 60% of the population of city E in 2023. If 25% of the population of G in 2021 were males, find the number of females as a percentage of the population of city H in 2024.

- (a) 33%
- (b) 41%
- (c) 52%
- (d) 57%
- (e) 45%

Answer: (e) 45%

Solution:

Population of G in 2021 = 60% of 360 = 216
Males = 25% of 216 = 54
Females = 216 – 54 = 162
Required percentage = $162/360 \times 100 = 45\%$

Q30.

$\frac{3}{5}$ of the population of city H in 2023 are literate, while $\frac{2}{5}$ of the population of city F in 2023 are illiterate. Find the difference between the total literate population of F and H together and the total illiterate population of F and H together.

- (a) 334
- (b) 258
- (c) 238
- (d) 302
- (e) 282

Answer: (e) 282

Solution:

Literate in H = $910 \times \frac{3}{5} = 546$
 Illiterate in H = $910 - 546 = 364$
 Illiterate in F = $500 \times \frac{2}{5} = 200$
 Literate in F = $500 - 200 = 300$
 Total literates = $546 + 300 = 846$
 Total illiterates = $364 + 200 = 564$
 Difference = $846 - 564 = 282$

Directions (Q31–Q34)

Read the following information carefully.

There are 270 students in three colleges U, V and W.

- Number of girls in V = 40.
- Boys in U are 75% of girls in V.
- Girls in U are 10 more than girls in V.
- Girls in W are 1.5 times the girls in V.
- Girls in W are twice the boys in W.
- Boys in V are 10 more than girls in U.

From the information:

College	Boys	Girls	Total
U	30	50	80
V	60	40	100
W	30	60	90
Total	120	150	270

Q31.

Find the difference between boys in U and V together and girls in V and W together.

- (a) 7
- (b) 10
- (c) 2
- (d) 18
- (e) 23

Answer: (b) 10

Solution:

Boys in U + V = $30 + 60 = 90$
 Girls in V + W = $40 + 60 = 100$
 Difference = 10

Q32.

Boys in college U are what percentage of the total students in college W?

- (a) 33.33%
- (b) 26.49%
- (c) 30.50%
- (d) 38.39%
- (e) 35.94%

Answer: (a) 33.33%

Solution:

Required percentage = $30/90 \times 100 = 33.33\%$ approximately

Q33.

Find the ratio of girls in U to boys in W.

- (a) 4:3
- (b) 5:3
- (c) 5:4
- (d) 3:2
- (e) 7:4

Answer: (b) 5:3

Solution:

Girls in U : Boys in W = $50 : 30 = 5 : 3$

Q34.

The total number of students in college X is 15% more than the total number of students in college U. The ratio of boys in W to boys in X is 3:5. Find the number of girls in X.

- (a) 52
- (b) 48
- (c) 32
- (d) 42
- (e) 36

Answer: (d) 42

Solution:

Students in X = $115\% \times 80 = 92$

Boys in W = 30.

Boys W : Boys X = 3:5

Boys in X = $30 \times 5/3 = 50$

Girls in X = $92 - 50 = 42$

Q35. Mixture

The ratio of milk to water in Jar A is 7:3, while the ratio in Jar B is 3:5. The quantity of milk in Jar A is 42 litres more than the quantity of milk in Jar B. After mixing both jars, the total quantity of milk exceeds the total quantity of water by 22 litres. Find the quantity of milk in the final mixture.

- (a) 89 litres
- (b) 84 litres
- (c) 79 litres
- (d) 94 litres
- (e) 74 litres

Answer: (b) 84 litres

Solution:

Let Jar A contain:

Milk = $7x$, Water = $3x$

Jar B:

Milk = $3y$, Water = $5y$

Given:

$$7x - 3y = 42 \dots\dots(1)$$

Also, total milk – total water = 22

$$(7x + 3y) - (3x + 5y) = 22$$

$$4x - 2y = 22$$

$$2x - y = 11 \dots\dots(2)$$

$$\text{So, } y = 2x - 11$$

Substituting in (1): $7x - 3(2x - 11) = 42$

$$7x - 6x + 33 = 42$$

$$x + 33 = 42$$

$$x = 9$$

$$y = 2(9) - 11 = 7$$

Milk in Jar A = $7 \times 9 = 63$ litres

Milk in Jar B = $3 \times 7 = 21$ litres

Total milk = $63 + 21 = 84$ litres

Directions (Q36-Q38)

Solve both equations and establish the relationship between x and y .

- (a) $x > y$
- (b) $x \geq y$
- (c) $x < y$
- (d) $x \leq y$
- (e) $x = y$ or no relation can be established

Q36.

I. $x^2 - 9x + 14 = 0$

II. $2y^2 - 16y + 30 = 0$

Answer: (e) No relation

Solution:

I. $(x - 2)(x - 7) = 0$

$x = 2, 7$

II. $2y^2 - 16y + 30 = 0 \rightarrow y^2 - 8y + 15 = 0$

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

$y = 3, 5$

Since some values of x are greater than y while others are smaller: No definite relationship.

Q37.

I. $x^2 - 19x + 90 = 0$

II. $3y^2 - 30y + 72 = 0$

Answer: (a) $x > y$

Solution:

I. $(x - 9)(x - 10) = 0$

$x = 9, 10$

II. $3y^2 - 30y + 72 = 0 \rightarrow y^2 - 10y + 24 = 0$

$(y - 4)(y - 6) = 0$

$y = 4, 6$

Every possible value of x is greater than every possible value of y .
Therefore, $x > y$.

Q38.

I. $x^2 - 14x + 45 = 0$

II. $y^2 - 7y + 10 = 0$

Answer: (b) $x \geq y$

Solution:

I. $(x - 5)(x - 9) = 0$

$x = 5, 9$

II. $(y - 2)(y - 5) = 0$

$y = 2, 5$

Every possible value of x is greater than or equal to every possible value of y .
Therefore: $x \geq y$

Directions (Q39–Q42)

Find the approximate value of the question mark (?).

Q39.

$$44.95\% \text{ of } 240.10 + 54.85\% \text{ of } 159.90 - 69.80 = ?$$

- (a) 118
- (b) 132
- (c) 126
- (d) 145
- (e) 111

Answer: (c) 126

Solution:

Approximate:

$$\begin{aligned} &45\% \text{ of } 240 + 55\% \text{ of } 160 - 70 \\ &= 108 + 88 - 70 \\ &= 126 \end{aligned}$$

Q40.

$$84.95 \div 4.98 \times 9.90 + 304.10 = ?^2 + 14.90 \times 10.10$$

- (a) 27
- (b) 32
- (c) 22
- (d) 18
- (e) 7

Answer: (d) 18

Solution:

$$\begin{aligned} &\text{Approximate: } 85 \div 5 \times 10 + 304 = 17 \times 10 + 304 = 170 + 304 = 474 \\ &\text{And, } 15 \times 10 = 150 \\ &\text{Therefore, } ?^2 \approx 474 - 150 = 324 \\ &? \approx \sqrt{324} = 18 \end{aligned}$$

Q41.

$$40.10\% \text{ of } (899.80 - 249.60 - 199.90 - 100.30) = ?$$

- (a) 133
- (b) 116
- (c) 147

- (d) 140
(e) 127

Answer: (d) 140

Solution:

Approximate expression: $900 - 250 - 200 - 100 = 350$

So, $? = 40\%$ of 350

$? = 40/100 \times 350$

$? = \mathbf{140}$

Q42.

$(? - 380.20) - 24.90\% \text{ of } (2399.60 \div 19.98) = 16.20 \times 18.10 \div 72.60$

- (a) 414
(b) 368
(c) 446
(d) 483
(e) 396

Answer: (a) 414

Solution:

Approximate: $2400 \div 20 = 120$

$25\% \text{ of } 120 = 30$

Right side: $16 \times 18 \div 72 = 4$

Therefore, $? - 380 - 30 = 4$

$? = 414$

Directions (Q43-Q48)

The following table shows the average number of students visiting Schools A and B on five different days.

Day	Average of A & B
Monday	77
Tuesday	117
Wednesday	87
Thursday	102
Friday	90

Additional information:

- On Monday, students visiting from School B are 26 more than those from A.
- The ratio of students visiting from B from Monday to Friday is 5:6:3:8:4.

Basic Calculation

Since average = $(A+B)/2$:

Day	A+B	A	B
Monday	154	64	90
Tuesday	234	126	108
Wednesday	174	120	54
Thursday	204	60	144
Friday	180	108	72

Q43.

On Monday, the ratio of boys to girls visiting from A is 5:3. The number of boys visiting from B on Friday is equal to the number of girls visiting from A on Monday. Find the girls visiting from B on Friday as a percentage of the students visiting from A on Wednesday.

- (a) 26%
- (b) 40%
- (c) 47%
- (d) 52%
- (e) 33%

Answer: (b) 40%

Solution:

A students on Monday = 64

Boys : Girls = 5:3

Girls from A = $64 \times \frac{3}{8} = 24$

Therefore, boys from B on Friday = 24.

Total students from B on Friday = 72.

Girls from B on Friday = $72 - 24 = 48$

Required percentage = $48/120 \times 100 = 40\%$

Q44.

The total number of students in School G is 50% more than the average number of students visiting from B on Monday, Thursday and Friday. The ratio of total students in G to H is 9:10. Find the number of students in H.

- (a) 198
- (b) 190
- (c) 149
- (d) 170
- (e) 178

Answer: (d) 170

Solution:

$$\text{Average B students} = (90 + 144 + 72)/3 = 306/3 = 102$$

$$\text{Students in G} = 150\% \times 102 = 153$$

$$G : H = 9 : 10$$

$$H = 153 \times 10/9 = 170$$

Q45.

Find the average number of students visiting from School B on all five days.

(a) 95.9

(b) 93.6

(c) 89.4

(d) 91.0

(e) 97.9

Answer: (b) 93.6

Solution:

$$\text{Total B students} = 90 + 108 + 54 + 144 + 72 = 468$$

$$\text{Average} = 468/5 = 93.6$$

Q46.

Students from A visiting on Wednesday participated in two activities — drama and music — in the ratio 7:5. Find the difference between students participating in music and the total number of students visiting from both schools on Thursday.

(a) 129

(b) 180

(c) 154

(d) 144

(e) 164

Answer: (c) 154

Solution:

$$\text{A students on Wednesday} = 120.$$

$$\text{Drama : Music} = 7 : 5$$

$$\text{Music participants} = 120 \times 5/12 = 50$$

$$\text{Total A+B students on Thursday} = 204$$

$$\text{Required difference} = 204 - 50 = 154$$

Q47.

The number of students visiting from A on Tuesday is what percentage more than the students visiting from B on Friday?

- (a) 75%
- (b) 82%
- (c) 86%
- (d) 61%
- (e) 90%

Answer: (a) 75%

Solution:

A on Tuesday = 126

B on Friday = 72

Difference = 54

Required percentage = $54/72 \times 100 = 75\%$

Q48.

On a particular week, 25% of the students scheduled to visit from A on Monday did not visit, while 50% of those scheduled from B on Wednesday did not visit. Find the total number of students who did not visit.

- (a) 32
- (b) 37
- (c) 43
- (d) 28
- (e) 50

Answer: (c) 43

Solution:

A on Monday = 64.

Non-visitors = 25% of 64 = 16

B on Wednesday = 54.

Non-visitors = 50% of 54 = 27

Total non-visitors = 16 + 27 = 43