

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

Quantitative Aptitude Set-01

Directions (Q1–Q6)

Study the following data carefully and answer the questions.

The table shows the **total population (males + females)** of four cities in 2024 and 2025.

City 2024 2025

P 240 540

Q 360 660

R 600 480

S 720 300

Q1.

The ratio of males to females in city P in 2024 is **3:5**. The number of females in city P in 2025 is twice the number of females in 2024. Find the difference between the number of males in city P in 2024 and 2025.

- (a) 120
- (b) 180
- (c) 150
- (d) 200
- (e) 210

Answer: (c) 150

Solution:

Males in P in 2024

$$= 240 \times \frac{3}{8} = 90$$

$$\text{Females in 2024} = 240 - 90 = 150$$

$$\text{Females in 2025} = 150 \times 2 = 300$$

$$\text{Males in 2025} = 540 - 300 = 240$$

$$\text{Required difference} = 240 - 90 = \mathbf{150}$$

Q2.

The population of city T in 2024 is 25% more than that of city Q in 2024. If the total population of city T in 2024 and 2025 together is 1170, find its population in 2025.

- (a) 690
- (b) 720
- (c) 750
- (d) 700
- (e) 680

Answer: (b) 720

Solution:

Population of T in 2024

$$= 360 \times 125/100$$

$$= 450$$

Population of T in 2025

$$= 1170 - 450$$

$$= \mathbf{720}$$

Q3.

The population of city Q in 2023 was 20% less than the average population of cities P and R in 2025. Find the ratio of the population of Q in 2023 to that of S in 2024.

- (a) 17:30
- (b) 19:30
- (c) 15:28
- (d) 16:25
- (e) 21:40

Answer: (a) 17:30

Solution:

Average population of P and R in 2025

$$= (540 + 480)/2$$
$$= 510$$

Q's population in 2023

$$= 80\% \text{ of } 510$$
$$= 408$$

Required ratio

$$= 408 : 720$$
$$= \mathbf{17 : 30}$$

Q4.

The number of males in city S in 2024 is 50% of the total population of city Q in 2025. The number of males in S in 2025 is half the number of males in S in 2024. Find the total number of females in S in 2024 and 2025 together.

- (a) 505
- (b) 495
- (c) 525
- (d) 550
- (e) 515

Answer: (c) 525

Solution:

Males in S in 2024

$$= 50\% \text{ of } 660 = 330$$

Females in S in 2024

$$= 720 - 330 = 390$$

Males in S in 2025

$$= 330/2 = 165$$

Females in S in 2025

$$= 300 - 165 = 135$$

Required total

$$= 390 + 135$$
$$= \mathbf{525}$$

Q5.

The population of city R in 2021 was 75% of the population of city P in 2024. If 40% of the population of R in 2021 were males, find the number of females as a percentage of the population of city S in 2025.

- (a) 32%
- (b) 40%
- (c) 36%
- (d) 42%
- (e) 30%

Answer: (c) 36%

Solution:

Population of R in 2021

$$= 75\% \text{ of } 240$$
$$= 180$$

$$\text{Females} = 60\% \text{ of } 180$$
$$= 108$$

Required percentage

$$= 108/300 \times 100$$
$$= \mathbf{36\%}$$

Q6.

$\frac{5}{8}$ of the population of city S in 2024 are literate, while $\frac{7}{12}$ of the population of city Q in 2024 are illiterate. Find the difference between the total literate population of Q and S together and the total illiterate population of Q and S together.

- (a) 100
- (b) 120
- (c) 150

(d) 140

(e) 110

Answer: (b) 120

Solution:

Literate in S

$$= 720 \times \frac{5}{8} = 450$$

Illiterate in S

$$= 720 - 450 = 270$$

Illiterate in Q

$$= 360 \times \frac{7}{12} = 210$$

Literate in Q

$$= 360 - 210 = 150$$

$$\text{Total literates} = 450 + 150 = 600$$

$$\text{Total illiterates} = 270 + 210 = 480$$

$$\text{Difference} = 600 - 480 = \mathbf{120}$$

Directions (Q7–Q10)

Read the following information carefully.

There are **302 students** in three colleges X, Y and Z.

- Number of girls in Y = 40.
- Boys in X are 75% of girls in Y.
- Girls in X are 10 more than girls in Y.
- Girls in Z are twice the girls in Y.
- Girls in Z are 2.5 times the boys in Z.
- Boys in Y are 20 more than girls in X.

From the information:

College	Boys	Girls	Total
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X	30	50	80
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Y	70	40	110
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Z	32	80	112
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Total	132	170	302
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Q7.

Find the difference between boys in X and Y together and girls in Y and Z together.

(a) 30

(b) 20

(c) 15

(d) 25

(e) 10

Answer: (b) 20

Solution:

Boys in X + Y = $30 + 70 = 100$

Girls in Y + Z = $40 + 80 = 120$

Difference = **20**

Q8.

Boys in college X are what percentage of the total students in college Z?

(a) 28.57%

(b) 25%

(c) 26.79%

(d) 30%

(e) 24.50%

Answer: (c) 26.79%

Solution:

Required percentage

$$= 30/112 \times 100$$
$$= \mathbf{26.79\% \text{ approximately}}$$

Q9.

Find the ratio of girls in X to boys in Z.

- (a) 25:16
- (b) 16:25
- (c) 20:13
- (d) 15:8
- (e) 24:17

Answer: (a) 25:16

Solution:

Girls in X : Boys in Z

$$= 50 : 32$$

$$= \mathbf{25 : 16}$$

Q10.

The total number of students in college W is 20% more than the total number of students in college X. The ratio of boys in Z to boys in W is 4:5. Find the number of girls in W.

- (a) 52
- (b) 58
- (c) 56
- (d) 60
- (e) 54

Answer: (c) 56

Solution:

Students in W

$$= 120\% \text{ of } 80$$

$$= 96$$

$$\text{Boys in Z} = 32.$$

Boys Z : Boys W = 4:5

Boys in W

$$= 32 \times \frac{5}{4}$$

$$= 40$$

Girls in W

$$= 96 - 40$$

$$= \mathbf{56}$$

Q11. Mixture

The ratio of milk to water in Jar A is **7:5**, while the ratio in Jar B is **4:7**. The quantity of water in Jar B is 1 litre less than the quantity of water in Jar A. After mixing both jars, the total quantity of water is 1 litre more than the total quantity of milk. Find the quantity of water in the final mixture.

(a) 89 litres

(b) 99 litres

(c) 109 litres

(d) 95 litres

(e) 105 litres

Answer: (b) 99 litres

Solution:

Let Jar A contain:

$$\text{Milk} = 7x$$

$$\text{Water} = 5x$$

Jar B:

$$\text{Milk} = 4y$$

$$\text{Water} = 7y$$

Given:

$$5x - 7y = 1 \dots\dots(1)$$

Also,

Total water – Total milk = 1

$$5x + 7y - (7x + 4y) = 1$$

$$3y - 2x = 1 \dots\dots(2)$$

From (2):

$$2x = 3y - 1$$

Solving with (1):

$$x = 10 \text{ and } y = 7.$$

Therefore,

$$\text{Water in Jar A} = 5 \times 10 = 50 \text{ litres}$$

$$\text{Water in Jar B} = 7 \times 7 = 49 \text{ litres}$$

$$\text{Total water} = 50 + 49 = \mathbf{99 \text{ litres}}$$

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. $4x^2 - 11x + 6 = 0$

II. $2y^2 - 9y + 4 = 0$

Answer: (e) No relation

Solution:

I.

$$4x^2 - 11x + 6 = 0$$

$$(4x - 3)(x - 2) = 0$$

$$x = 3/4, 2$$

II.

$$2y^2 - 9y + 4 = 0$$

$$(2y - 1)(y - 4) = 0$$

$$y = 1/2, 4$$

Since some values of x are greater than y while others are smaller:

No definite relationship.

Q13.

I. $x^2 - 5x + 6 = 0$

II. $2y^2 - 3y + 1 = 0$

Answer: (a) $x > y$

Solution:

I.

$$(x - 2)(x - 3) = 0$$

$$x = 2, 3$$

II.

$$(2y - 1)(y - 1) = 0$$

$$y = 1/2, 1$$

Both possible values of x are greater than both possible values of y .

Therefore, **$x > y$** .

Q14.

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

II. $y^2 - 6y + 8 = 0$

Answer: (d) $x \leq y$

Solution:

I.

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

$$x = 2, -1$$

II.

$$(y - 2)(y - 4) = 0$$

$$y = 2, 4$$

Every possible value of x is less than or equal to every possible value of y.

Therefore:

$$\mathbf{x \leq y}$$

Directions (Q15–Q18)

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

Q15.

$$24.98\% \text{ of } 160.12 + 39.99\% \text{ of } 249.90 - 89.80 = ?$$

(a) 60

(b) 50

(c) 40

(d) 70

(e) 55

Answer: (b) 50

Solution:

Approximate:

$$25\% \text{ of } 160 + 40\% \text{ of } 250 - 90$$

$$= 40 + 100 - 90$$

$$= \mathbf{50}$$

Q16.

$$72.10 \div 8.02 \times 15.90 + 255.20 = ?^2 + 14.90 \times 10.10$$

- (a) 18
- (b) 14
- (c) 16
- (d) 20
- (e) 12

Answer: (c) 16

Solution:

Approximate: $72 \div 8 \times 16 + 255 = 9 \times 16 + 255 = 144 + 255 = 399$

And, $15 \times 10 = 150$

Therefore, $?^2 \approx 399 - 150 = 249$ $? \approx \sqrt{249} \approx 15.8$

Hence, **? $\approx$ 16**

Q17.

$$?\% \text{ of } (899.6 - 299.8 - 199.7 - 100.2) = 75.1$$

- (a) 20
- (b) 30
- (c) 25
- (d) 35
- (e) 40

Answer: (c) 25

Solution:

Approximate expression: $900 - 300 - 200 - 100 = 300$

So, $?\% \text{ of } 300 = 75$

$$?/100 \times 300 = 75$$

$$? = 25$$

Q18.

$$(? - 420.2) - 40.1\% \text{ of } (1999.5 \div 19.98) = 15.1 \times 24.2 \div 120.5$$

- (a) 453
- (b) 473
- (c) 463
- (d) 483
- (e) 443

Answer: (c) 463

Solution: Approximate: $2000 \div 20 = 100$

$$40\% \text{ of } 100 = 40$$

$$\text{Right side: } 15 \times 24 \div 120 = 3$$

$$\text{Therefore, } ? - 420 - 40 = 3$$

$$? = 463$$

Hence, **463**

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	56
Tuesday	50
Wednesday	65
Thursday	44
Friday	54

Additional information:

- On Monday, students visiting from School B are **16 more** than those from A.
- The ratio of students visiting from B from Monday to Friday is **8:4:5:3:6**.

Basic Calculation

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

Day	A+B	A	B
Monday	112	48	64
Tuesday	100	68	32
Wednesday	130	90	40
Thursday	88	64	24
Friday	108	60	48

Q19.

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) 30%
- (b) 33.33%
- (c) 37.50%
- (d) 25%
- (e) 35%

Answer: (b) 33.33%

Solution: A students on Monday = 48

Boys : Girls = 5:3

Girls from A = $48 \times \frac{3}{8} = 18$

Therefore, boys from B on Friday = 18.

Total students from B on Friday = 48.

Girls from B on Friday = $48 - 18 = 30$

Required percentage = $\frac{30}{90} \times 100 = 33.33\%$

Q20.

The total number of students in School C is 50% 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 4:5. Find the number of students in D.

- (a) 80
- (b) 90
- (c) 85
- (d) 95
- (e) 75

Answer: (c) 85

Solution: Average B students:= $(64 + 24 + 48)/3 = 136/3$

Students in C= $150\% \times 136/3 = 68$

C : D = 4 : 5

D = $68 \times 5/4 = 85$

Q21.

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

- (a) 40.8
- (b) 41.2
- (c) 41.6
- (d) 42.4
- (e) 39.6

Answer: (c) 41.6

Solution: Total B students= $64 + 32 + 40 + 24 + 48 = 208$

Average= $208/5 = 41.6$

Q22.

Students from A visiting on Wednesday participated in two games—football and hockey—in the ratio 2:1. Find the difference between students participating in hockey and the total number of students visiting from both schools on Thursday.

- (a) 48
- (b) 58
- (c) 52
- (d) 60
- (e) 55

Answer: (b) 58

Solution: A students on Wednesday = 90.

Football : Hockey = 2 : 1

Hockey players = $90 \times \frac{1}{3} = 30$

Total A+B students on Thursday = 88

Required difference = $88 - 30 = 58$

Q23.

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

- (a) 44.44%
- (b) 37.50%
- (c) 41.67%
- (d) 33.33%
- (e) 45.83%

Answer: (c) 41.67%

Solution: A on Tuesday = 68

B on Friday = 48

Difference = 20

Required percentage = $\frac{20}{48} \times 100 = 41.67\%$

Q24.

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) 30
- (b) 34
- (c) 28
- (d) 32
- (e) 36

Answer: (d) 32

Solution: A on Monday = 48.

Non-visitors = 25% of 48 = 12

B on Wednesday = 40.

Non-visitors = 50% of 40 = 20

Total non-visitors = 12 + 20 = **32**

Directions (Q25–Q30)

Study the following data carefully and answer the questions.

The table shows the total population (males + females) of four cities in 2024 and 2025.

City	2024	2025
J	480	900
K	600	780
L	720	660
M	840	540

Q25.

The ratio of males to females in city J in 2024 is 3:5. The number of females in city J in 2025 is twice the number of females in 2024. Find the difference between the number of males in city J in 2024 and 2025.

- (a) 90
- (b) 150
- (c) 120
- (d) 100
- (e) 130

Answer: (c) 120

Solution:

Males in J in 2024

$$= 480 \times \frac{3}{8} = 180$$

$$\text{Females in 2024} = 480 - 180 = 300$$

$$\text{Females in 2025} = 300 \times 2 = 600$$

$$\text{Males in 2025} = 900 - 600 = 300$$

$$\text{Required difference} = 300 - 180 = 120$$

Q26.

The population of city N in 2024 is 25% more than that of city K in 2024. If the total population of city N in 2024 and 2025 together is 1400, find its population in 2025.

- (a) 600
- (b) 650
- (c) 700
- (d) 625
- (e) 675

Answer: (b) 650

Solution:

Population of N in 2024

$$= 600 \times \frac{125}{100} = 750$$

Population of N in 2025

$$= 1400 - 750 = 650$$

Q27.

The population of city K in 2023 was 20% less than the average population of cities J and L in 2025. Find the ratio of the population of K in 2023 to that of M in 2024.

- (a) 24:35
- (b) 26:35
- (c) 25:34

(d) 27:35

(e) 26:37

Answer: (b) 26:35

Solution:

Average population of J and L in 2025

$$= (900 + 660)/2 = 780$$

K's population in 2023

$$= 80\% \text{ of } 780 = 624$$

Required ratio

$$= 624 : 840$$

$$= 26 : 35$$

Q28.

The number of males in city L in 2024 is 50% of the total population of city K in 2025. The number of males in L in 2025 is half the number of males in L in 2024. Find the total number of females in L in 2024 and 2025 together.

(a) 775

(b) 795

(c) 815

(d) 805

(e) 785

Answer: (b) 795

Solution:

Males in L in 2024

$$= 50\% \text{ of } 780 = 390$$

Females in L in 2024

$$= 720 - 390 = 330$$

Males in L in 2025

$$= 390/2 = 195$$

Females in L in 2025

$$= 660 - 195 = 465$$

Required total

$$= 330 + 465 = 795$$

Q29.

The population of city L in 2021 was 75% of the population of city J in 2024. If 40% of the population of L in 2021 were males, find the number of females as a percentage of the population of city M in 2025.

- (a) 32%
- (b) 40%
- (c) 36%
- (d) 44%
- (e) 30%

Answer: (b) 40%

Solution:

Population of L in 2021

$$= 75\% \text{ of } 480 = 360$$

$$\text{Males} = 40\% \text{ of } 360 = 144$$

$$\text{Females} = 360 - 144 = 216$$

Required percentage

$$= 216/540 \times 100 = 40\%$$

Q30.

5/8 of the population of city L in 2024 are literate, while 7/12 of the population of city M in 2024 are illiterate. Find the difference between the total literate population of L and M together and the total illiterate population of L and M together.

- (a) 30
- (b) 40
- (c) 50
- (d) 60
- (e) 20

Answer: (b) 40

Solution:

Literate in L

$$= 720 \times 5/8 = 450$$

Illiterate in L

$$= 720 - 450 = 270$$

Illiterate in M

$$= 840 \times 7/12 = 490$$

Literate in M

$$= 840 - 490 = 350$$

$$\text{Total literates} = 450 + 350 = 800$$

$$\text{Total illiterates} = 270 + 490 = 760$$

$$\text{Difference} = 800 - 760 = 40$$

Directions (Q31–Q34)

Read the following information carefully.

There are 401 students in three colleges X, Y and Z.

Number of girls in Y = 60.

Boys in X are 75% of girls in Y.

Girls in X are 15 more than girls in Y.

Girls in Z are 1.5 times the girls in Y.

Girls in Z are 2.5 times the boys in Z.

Boys in Y are 20 more than girls in X.

From the information:

Q31.

Find the difference between boys in X and Y together and girls in Y and Z together.

- (a) 5
- (b) 10
- (c) 15
- (d) 20
- (e) 0

Answer: (b) 10

Solution:

$$\text{Boys in X} + \text{Y} = 45 + 95 = 140$$

$$\text{Girls in Y} + \text{Z} = 60 + 90 = 150$$

$$\text{Difference} = 150 - 140 = 10$$

Q32.

Boys in college X are what percentage of the total students in college Z?

- (a) 30%
- (b) 33.33%
- (c) 35.71%

(d) 38.09%

(e) 40%

Answer: (c) 35.71%

Solution:

Required percentage

$$= 45/126 \times 100$$

$$= 35.71\% \text{ approximately}$$

Q33.

Find the ratio of girls in X to boys in Z.

(a) 25:12

(b) 12:25

(c) 15:8

(d) 5:3

(e) 20:9

Answer: (a) 25:12

Solution:

Girls in X : Boys in Z

$$= 75 : 36$$

$$= 25 : 12$$

Q34.

The total number of students in college W is 20% more than the total number of students in college X. The ratio of boys in Z to boys in W is 4:5. Find the number of girls in W.

(a) 95

(b) 99

(c) 105

(d) 101

(e) 93

Answer: (b) 99

Solution:

Students in W

$$= 120\% \times 120 = 144$$

Boys in Z = 36.

$$\text{Boys Z : Boys W} = 4:5$$

Boys in W

$$= 36 \times \frac{5}{4} = 45$$

Girls in W

$$= 144 - 45 = 99$$

Q35.

Mixture: The ratio of milk to water in Jar A is 5:3, while the ratio in Jar B is 2:5. The quantity of water in Jar B is 2 litres more than the quantity of water in Jar A. After mixing both jars, the total quantity of milk is 4 litres more than the total quantity of water. Find the quantity of milk in the final mixture.

(a) 152 litres

(b) 162 litres

(c) 172 litres

(d) 158 litres

(e) 168 litres

Answer: (b) 162 litres

Solution:

Let Jar A contain:

$$\text{Milk} = 5x, \text{Water} = 3x$$

Jar B:

$$\text{Milk} = 2y, \text{Water} = 5y$$

Given:

$$5y - 3x = 2 \dots\dots(1)$$

Also,

$$\text{Total milk} - \text{Total water} = 4$$

$$(5x + 2y) - (3x + 5y) = 4$$

$$2x - 3y = 4 \dots\dots(2)$$

$$\text{From (1): } 3x = 5y - 2$$

Solving with (2):

$$y = 16 \text{ and } x = 26.$$

Therefore,

$$\text{Milk in Jar A} = 5 \times 26 = 130 \text{ litres}$$

$$\text{Milk in Jar B} = 2 \times 16 = 32 \text{ litres}$$

$$\text{Total milk} = 130 + 32 = 162 \text{ litres}$$

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. $3x^2 - 14x + 8 = 0$

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

Answer: (e) No relation

Solution:

I.

$$3x^2 - 14x + 8 = 0$$

$$(3x - 2)(x - 4) = 0$$

$$x = 2/3, 4$$

II.

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

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

$$y = 2, 5$$

Since some values of x are greater than y while others are smaller:

No definite relationship.

Q37.

I. $x^2 - 7x + 12 = 0$

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

Answer: (a) $x > y$

Solution:

I.

$$(x - 3)(x - 4) = 0$$

$$x = 3, 4$$

II.

$$(2y - 1)(y - 2) = 0$$

$$y = 1/2, 2$$

Every possible value of x is greater than every possible value of y .

Therefore, $x > y$.

Q38.

I. $x^2 - 3x + 2 = 0$

II. $y^2 - 6y + 8 = 0$

Answer: (d) $x \leq y$

Solution:

I.

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

$$x = 1, 2$$

II.

$$(y - 2)(y - 4) = 0$$

$$y = 2, 4$$

Every possible value of x is less than or equal to every possible value of y .

Therefore:

$$x \leq y$$

Directions (Q39–Q42)

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

Q39.

$$23.95\% \text{ of } 250.10 + 19.89\% \text{ of } 149.95 - 29.80 = ?$$

(a) 50

(b) 55

(c) 60

(d) 65

(e) 70

Answer: (c) 60

Solution:

Approximate:

$$24\% \text{ of } 250 + 20\% \text{ of } 150 - 30$$

$$= 60 + 30 - 30$$

$$= 60$$

Q40.

$$63.95 \div 7.98 \times 12.10 + 180.15 = ?^2 + 9.90 \times 8.05$$

- (a) 12
- (b) 14
- (c) 16
- (d) 18
- (e) 10

Answer: (b) 14

Solution:

$$\text{Approximate: } 64 \div 8 \times 12 + 180 = 8 \times 12 + 180 = 96 + 180 = 276$$

$$\text{And, } 10 \times 8 = 80$$

$$\text{Therefore, } ?^2 \approx 276 - 80 = 196$$

$$? \approx \sqrt{196} = 14$$

Q41.

$$?\% \text{ of } (799.80 - 199.60 - 149.90 - 50.30) = 80.20$$

- (a) 15
- (b) 20
- (c) 25
- (d) 30
- (e) 35

Answer: (b) 20

Solution:

$$\text{Approximate expression: } 800 - 200 - 150 - 50 = 400$$

$$\text{So, } ?\% \text{ of } 400 = 80$$

$$?/100 \times 400 = 80$$

$$? = 20$$

Q42.

$$(? - 350.30) - 30.2\% \text{ of } (2400.60 \div 23.98) = 18.20 \times 20.10 \div 90.60$$

- (a) 374
- (b) 384
- (c) 394
- (d) 404
- (e) 364

Answer: (b) 384

Solution:

Approximate: $2400 \div 24 = 100$

30% of 100 = 30

Right side: $18 \times 20 \div 90 = 4$

Therefore, $? - 350 - 30 = 4$

$? = 384$

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	72
Tuesday	65
Wednesday	73
Thursday	50
Friday	57

Additional information:

On Monday, students visiting from School B are 16 more than those from A.

The ratio of students visiting from B from Monday to Friday is 8:4:5:3:6.

Basic Calculation

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

Day	A+B	A	B
Monday	144	64	80
Tuesday	130	90	40
Wednesday	146	96	50
Thursday	100	70	30
Friday	114	54	60

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) 33.33%
- (b) 35%
- (c) 37.5%
- (d) 40%
- (e) 42.5%

Answer: (c) 37.5%

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 = 60.

Girls from B on Friday = $60 - 24 = 36$

Required percentage = $\frac{36}{96} \times 100 = 37.5\%$

Q44.

The total number of students in School G is 50% more than the average number of students visiting from B on Tuesday, Wednesday and Thursday. The ratio of total students in G to H is 4:5. Find the number of students in H.

- (a) 65
- (b) 70
- (c) 75
- (d) 80
- (e) 85

Answer: (c) 75

Solution:

Average B students = $(40 + 50 + 30)/3 = 120/3 = 40$

Students in G = $150\% \times 40 = 60$

G : H = 4 : 5

H = $60 \times \frac{5}{4} = 75$

Q45.

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

- (a) 48
- (b) 50
- (c) 52
- (d) 54
- (e) 56

Answer: (c) 52

Solution:

Total B students = $80 + 40 + 50 + 30 + 60 = 260$

Average = $260/5 = 52$

Q46.

Students from A visiting on Wednesday participated in two games—football and hockey—in the ratio 2:1. Find the difference between students participating in hockey and the total number of students visiting from both schools on Thursday.

- (a) 60
- (b) 64
- (c) 68
- (d) 72
- (e) 66

Answer: (c) 68

Solution:

A students on Wednesday = 96.

Football : Hockey = 2 : 1

Hockey players = $96 \times \frac{1}{3} = 32$

Total A+B students on Thursday = 100

Required difference = $100 - 32 = 68$

Q47.

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

- (a) 40%
- (b) 45%
- (c) 50%
- (d) 55%
- (e) 60%

Answer: (c) 50%

Solution:

A on Tuesday = 90

B on Friday = 60

Difference = 30

Required percentage = $30/60 \times 100 = 50\%$

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) 35

(b) 38

(c) 41

(d) 44

(e) 39

Answer: (c) 41

Solution:

A on Monday = 64.

Non-visitors = 25% of 64 = 16

B on Wednesday = 50.

Non-visitors = 50% of 50 = 25

Total non-visitors = 16 + 25 = 41