Quantitative Aptitude

Tabular Data Interpretations

Level-1

Q1 **Directions:** Answer the questions based on the information given below.
The table given below shows the total number of employees in five different departments of a company and the ratio of number of male employees to number of female employees in the same departments.

Departments	Total number of employees	Ratio of male to female employees
Accounts	864	5:4
Security	624	7:6
IT	936	5:8
Finance	630	4:3
HR	528	5:6
Marketing	600	3:2

What is the ratio of the number of males in Security to the number of males in HR?
(A) 5:8 (B) 7:5
(C) 1:2 (D) 3:7
(E) None of these

Q2 **Directions:** Answer the questions based on the information given below.
The table given below shows the total number of employees in five different departments of a company and the ratio of number of male employees to number of female employees in the same departments.

Departments	Total number of employees	Ratio of male to female employees
Accounts	864	5:4
Security	624	7:6
IT	936	5:8
Finance	630	4:3
HR	528	5:6
Marketing	600	3:2

What is the average number of female employees in Finance and HR?
(A) 434 (B) 548
(C) 279 (D) 121
(E) None of these

Q3 **Directions:** Answer the questions based on the information given below.
The table given below shows the total number of employees in five different departments of a company and the ratio of number of male employees to number of female employees in the same departments.

Departments	Total number of employees	Ratio of male to female employees
Accounts	864	5:4
Security	624	7:6
IT	936	5:8
Finance	630	4:3
HR	528	5:6
Marketing	600	3:2

Number of males in Marketing is how much percent more/less than the number of males in Accounts?

(A) 33% (B) 25%
(C) 13% (D) 56%
(E) None of these

Q4 **Directions:** Answer the questions based on the information given below.
The table given below shows the total number of employees in five different departments of a company and the ratio of number of male employees to number of female employees in the same departments.

Departments	Total number of employees	Ratio of male to female employees
Accounts	864	5:4
Security	624	7:6
IT	936	5:8
Finance	630	4:3
HR	528	5:6
Marketing	600	3:2

What is the difference between the number of females in security and HR?

(A) 112 (B) 67
(C) 34 (D) 50
(E) None of these

Q5 **Directions:** Answer the questions based on the information given below.
The table given below shows the total number of employees in five different departments of a company and the ratio of number of male employees to number of female employees in the same departments.

Departments	Total number of employees	Ratio of male to female employees
Accounts	864	5:4
Security	624	7:6
IT	936	5:8
Finance	630	4:3
HR	528	5:6
Marketing	600	3:2

What is the total number of females in IT?

(A) 576 (B) 900
(C) 786 (D) 256
(E) None of these

Q6 **Directions: The given table shows the list of different items produced by five different companies. Read the table carefully and answer the given questions.**

Products → / Company ↓	Washing Machine	Cooler	TV	AC
P	2624	3545	2119	1215
Q	3850	3265	3065	1820
R	4839	3158	1258	1745
S	2690	2132	2028	1250
T	3750	2530	3000	1675

Find the average number of total TV produced by all the companies together?

(A) 2394 (B) 2200

(C) 2294 (D) 2300

(E) none of these

Q7 Directions: The given table shows the list of different items produced by five different companies. Read the table carefully and answer the given questions.

Products → / Company ↓	Washing Machine	Cooler	TV	AC
P	2624	3545	2119	1215
Q	3850	3265	3065	1820
R	4839	3158	1258	1745
S	2690	2132	2028	1250
T	3750	2530	3000	1675

Find the difference between the total number of products produced by company R and the total number of products produced by company Q.

(A) 950 (B) 1000

(C) 1050 (D) 1100

(E) none of these

Q8 Directions: The given table shows the list of different items produced by five different companies. Read the table carefully and answer the given questions.

Products → / Company ↓	Washing Machine	Cooler	TV	AC
P	2624	3545	2119	1215
Q	3850	3265	3065	1820
R	4839	3158	1258	1745
S	2690	2132	2028	1250
T	3750	2530	3000	1675

Total number of Washing Machines produced by company Q and AC produced by company S together is what percent more or less than total number of TV produced by company T?

(A) 50 % (B) 60 %

(C) 40 % (D) 80 %

(E) 70%

Q9 Directions: The given table shows the list of different items produced by five different companies. Read the table carefully and answer the given questions.

Products → / Company ↓	Washing Machine	Cooler	TV	AC
P	2624	3545	2119	1215
Q	3850	3265	3065	1820
R	4839	3158	1258	1745
S	2690	2132	2028	1250
T	3750	2530	3000	1675

Find the ratio between the number of washing machines produced by companies Q and S together to the number of coolers produced by companies P and Q together.

(A) 227 : 218 (B) 218 : 227

(C) 217 : 227 (D) 227 : 217

(E) none of these

Q10 Directions: The given table shows the list of different items produced by five different companies. Read the table carefully and answer the given questions.

Products → / Company ↓	Washing Machine	Cooler	TV	AC
P	2624	3545	2119	1215
Q	3850	3265	3065	1820
R	4839	3158	1258	1745
S	2690	2132	2028	1250
T	3750	2530	3000	1675

40% of Washing Machine produced by company T remains unsold and 40% of the AC produced by company Q has been sold. The number of AC produced by company Q that remains unsold is what percent of the number of Washing Machine produced by company T remains unsold?

(A) 68.8 %
(B) 72.8 %
(C) 75 %
(D) 80 %
(E) 82.8 %

Q11 **Direction: Data of voters of 5 villages with total eligible voters in each village and percentage valid votes out of the total casted votes is tabulated below. If only two persons are standing in the election in each village and 15% of the total eligible voters in each village did not cast their votes then answer the following questions.**

Village	Total eligible voters	Valid votes %
M	12500	70
N	16000	65
O	9000	85
P	15500	80
Q	14500	75

Question: What is the number of valid votes got by the person who lost the election in village P if the winner got 55% of the valid votes?

(A) 3567
(B) 6543
(C) 5346
(D) 4743
(E) none of these

Q12 **Direction: Data of voters of 5 villages with total eligible voters in each village and percentage valid votes out of the total casted votes is tabulated below. If only two persons are standing in the election in each village and 15% of the total eligible voters in each village did not cast their votes then answer the following questions.**

Village	Total eligible voters	Valid votes %
M	12500	70
N	16000	65
O	9000	85
P	15500	80
Q	14500	75

Question: If the person who lost in village Q got 30% of valid votes, then by how many valid votes did the winner win the election?

(A) 2457
(B) $3697\frac{1}{2}$
(C) $3476\frac{1}{2}$
(D) 4678
(E) none of these

Q13 **Direction: Data of voters of 5 villages with total eligible voters in each village and percentage valid votes out of the total casted votes is tabulated below. If only two persons are standing in the election in each village and 15% of the total eligible voters in each village did not cast their votes then answer the following questions.**

Village	Total eligible voters	Valid votes %
M	12500	70
N	16000	65
O	9000	85
P	15500	80
Q	14500	75

Question: What is the average number of valid votes casted in villages M, N, and O?

(A) $8654\frac{1}{3}$

(B) 7654

(C) $8754\frac{1}{3}$

(D) $7593\frac{1}{3}$

(E) none of these

Q14 **Direction: Data of voters of 5 villages with total eligible voters in each village and percentage valid votes out of the total casted votes is tabulated below. If only two persons are standing in the election in each village and 15% of the total eligible voters in each village did not cast their votes then answer the following questions.**

Village	Total eligible voters	Valid votes %
M	12500	70
N	16000	65
O	9000	85
P	15500	80
Q	14500	75

Question: What is the ratio of the number of invalid votes casted in village N to the valid votes casted in village M?

(A) 12:17 (B) 17:22

(C) 16:25 (D) 23:25

(E) none of these

Q15 Study the following information carefully and answer the questions given below.

The given table shows the cumulative percentage distribution of mouse manufactured on different months, out of the total 8000 mouses manufactured on different months and the percentage and ratio of mouse sold by company through three different e-commerce companies: Flipkart, Amazon and Snapdeal.

Months	Cumulative %	% of mouse sold on Flipkart	Amazon: Snapdeal
March	20%	45%	6:5
April	35%	50%	3:2
May	60%	40%	7:5
June	90%	30%	4:3
July	100%	60%	5:3

Find the ratio of the number of mouse sold on Amazon in April to June.

(A) 4:7 (B) 3:8

(C) 5:9 (D) 2:7

(E) None of these

Q16 Study the following information carefully and answer the questions given below.

The given table shows the cumulative percentage distribution of mouse manufactured on different months, out of the total 8000 mouses manufactured on different months and the percentage and ratio of mouse sold by company through three different e-commerce companies: Flipkart, Amazon and Snapdeal.

Months	Cumulative %	% of mouse sold on Flipkart	Amazon: Snapdeal
March	20%	45%	6:5
April	35%	50%	3:2
May	60%	40%	7:5
June	90%	30%	4:3
July	100%	60%	5:3

What is the difference between the number of mouse sold on Flipkart in April and June?

(A) 100 (B) 120
(C) 140 (D) 130
(E) 150

Q17 Study the following information carefully and answer the questions given below.

The given table shows the cumulative percentage distribution of mouse manufactured on different months, out of the total 8000 mouses manufactured on different months and the percentage and ratio of mouse sold by company through three different e-commerce companies: Flipkart, Amazon and Snapdeal.

Months	Cumulative %	% of mouse sold on Flipkart	Amazon: Snapdeal
March	20%	45%	6:5
April	35%	50%	3:2
May	60%	40%	7:5
June	90%	30%	4:3
July	100%	60%	5:3

Find the average number of mouse sold in Snapdeal in all the months together.

(A) 324 (B) 356
(C) 339 (D) 378
(E) None of these

Q18 Study the following information carefully and answer the questions given below.

The given table shows the cumulative percentage distribution of mouse manufactured on different months, out of the total 8000 mouses manufactured on different months and the percentage and ratio of mouse sold by company through three different e-commerce companies: Flipkart, Amazon and Snapdeal.

Months	Cumulative %	% of mouse sold on Flipkart	Amazon: Snapdeal
March	20%	45%	6:5
April	35%	50%	3:2
May	60%	40%	7:5
June	90%	30%	4:3
July	100%	60%	5:3

What is the total number of mouse sold on Flipkart in July, March and May?

(A) 2000 (B) 1900
(C) 2200 (D) 2100
(E) None of these

Q19 Study the following information carefully and answer the questions given below.

The given table shows the cumulative percentage distribution of mouse manufactured on different months, out of the total 8000 mouses manufactured on different months and the percentage and ratio of mouse sold by company through three different e-commerce companies: Flipkart, Amazon and Snapdeal.

Months	Cumulative %	% of mouse sold on Flipkart	Amazon: Snapdeal
March	20%	45%	6:5
April	35%	50%	3:2
May	60%	40%	7:5
June	90%	30%	4:3
July	100%	60%	5:3

Total number of mouse manufactured in August is 40% more than that of May. If the ratio of the number mouse sold in Flipkart, Amazon and Snapdeal in August is 2:1:4, then find the difference between the number of mouse sold in Amazon in August and March.

(A) 40 (B) 60
(C) 70 (D) 50
(E) 80

Q20

The table shows three different articles (X, Y & Z) sell by four different shops (A, B, C & D). Read the table carefully and answer the following questions.

Shops	Average number of articles	Difference between article X and Y	Percentage of article Z
A	80	8	30
B	75	40	20
C	60	9	55
D	90	11	30

Number of article Z in shops A, B & C is approximately what percentage of total number of articles in same shops.

(A) 20% (B) 30%
(C) 40% (D) 50%
(E) 33%

Q21 The table shows three different articles (X, Y & Z) sell by four different shops (A, B, C & D). Read the table carefully and answer the following questions.

Shops	Average number of articles	Difference between article X and Y	Percentage of article Z
A	80	8	30
B	75	40	20
C	60	9	55
D	90	11	30

Find the sum of the maximum number of articles in shops A, B, and D.

(A) 300 (B) 299
(C) 298 (D) 304
(E) None of these

Q22 The table shows three different articles (X, Y & Z) sell by four different shops (A, B, C & D). Read the table carefully and answer the following questions.

Shops	Average number of articles	Difference between article X and Y	Percentage of article Z
A	80	8	30
B	75	40	20
C	60	9	55
D	90	11	30

The maximum number of article in shop B and D together is what percentage more than that of the total number of article X in shops A and B.

(A) 40% (B) 45%
(C) 50% (D) 55%
(E) None of these

Q23 The table shows three different articles (X, Y & Z) sell by four different shops (A, B, C & D). Read the table carefully and answer the following questions.

Shops	Average number of articles	Difference between article X and Y	Percentage of article Z
A	80	8	30
B	75	40	20
C	60	9	55
D	90	11	30

Find the difference between total number of article X & Y together and total number of article Z in all the shops.

(A) 453 (B) 390
(C) 321 (D) 324
(E) None of these

Q24 The table shows three different articles (X, Y & Z) sell by four different shops (A, B, C & D). Read the table carefully and answer the following questions.

Shops	Average number of articles	Difference between article X and Y	Percentage of article Z
A	80	8	30
B	75	40	20
C	60	9	55
D	90	11	30

If in shop M, total number of articles is equal to average number of articles in shops C and D together and number of article X is equal to average of minimum number of article X in shops A and B, then find the ratio of number of article Y and Z together to article X in shop M.

(A) 2 : 1 (B) 3 : 1
(C) 1 : 4 (D) 5 : 1
(E) None of these

Q25 Direction: Study the data carefully and answer the following questions.

A person started a business in the month of January of a certain year. Data given below is related to the total earning and profit out of the total earning of the person.

Table given below shows the following cumulative data.

Month	Total earning (in ₹)	Total profit (in ₹)
In January	12000	4000
Till February	21000	6000
Till March	36000	10500
Till April	50000	15500
Till May	60000	18000

Note: Total investment = Total earning - Total profit

Find the ratio of total investment in April to the total investment in May?

(A) 15: 14 (B) 3: 2
(C) 10: 9 (D) 9: 8
(E) 6: 5

Q26 Direction: Study the data carefully and answer the following questions.

A person started a business in the month of January of a certain year. Data given below is related to the total earning and profit out of total earning of the person.

Table given below shows the following cumulative data.

Month	Total earning (in ₹)	Total profit (in ₹)
In January	12000	4000
Till February	21000	6000
Till March	36000	10500
Till April	50000	15500
Till May	60000	18000

Note: Total investment = Total earning - Total profit

Find that total profit in March and May together is what percent of total earnings in March and May together?

(A) 14% (B) 28%
(C) 7% (D) 35%
(E) 21%

Q27 Direction: Study the data carefully and answer the following questions.

A person started a business in the month of January of a certain year. Data given below is related to the total earning and profit out of total earning of the person.

Table given below shows the following cumulative data.

Month	Total earning (in ₹)	Total profit (in ₹)
In January	12000	4000
Till February	21000	6000
Till March	36000	10500
Till April	50000	15500
Till May	60000	18000

Note: Total investment = Total earning - Total profit

Find the average of total earning in March, April and May?

(A) ₹13000 (B) ₹12500
(C) ₹15000 (D) ₹11500
(E) ₹12000

Q28 Direction: Study the data carefully and answer the following questions.

A person started a business in the month of January of a certain year. Data given below is related to the total earning and profit out of total earning of the person.

Table given below shows the following cumulative data.

Month	Total earning (in ₹)	Total profit (in ₹)
In January	12000	4000
Till February	21000	6000
Till March	36000	10500
Till April	50000	15500
Till May	60000	18000

Note: Total investment = Total earning - Total profit

If total earning in June is 85% of that in May and total profit in June is 40% more than that in May, then find the difference between total investment in February and that in June?

(A) ₹2000 (B) ₹1500
(C) ₹2500 (D) ₹1000
(E) ₹3000

Q29 Direction: Study the data carefully and answer the following questions.

A person started a business in the month of January of a certain year. Data given below is related to the total earning and profit out of total earning of the person.

Table given below shows the following cumulative data.

Month	Total earning (in ₹)	Total profit (in ₹)
In January	12000	4000
Till February	21000	6000
Till March	36000	10500
Till April	50000	15500
Till May	60000	18000

Note: Total investment = Total earning - Total profit

Total investment in April is what percent more or less than that in January?

(A) 11.11% less (B) 16.67% more
(C) 10% less (D) 12.5% more
(E) 9.09% more

Q30 Directions: Study the following information carefully and answer based on it.

The given table chart shows the number of black buckets in five different months i.e. June, July, August, September and October and also given the ratio of number of black and pink buckets sold in five different months, the percentage of orange buckets sold out of total number of buckets sold.

Months	Number of black buckets sold	Ratio of number of black and pink buckets sold	% of number of orange buckets sold
June	90	3:4	40%
July	120	1:2	25%
August	168	6:7	35%
September	350	5:2	30%
October	80	2:3	20%

Find the ratio of the number of black and orange buckets sold in July to the number of pink buckets sold in July and October together ?

(A) 2 : 3 (B) 3 : 7
(C) 1 : 3 (D) 2 : 9
(E) None of these

Q31 Directions: Study the following information carefully and answer based on it.

The given table chart shows the number of black buckets in five different months i.e. June, July, August, September and October and also given the ratio of number of black and pink buckets sold in five different months, the percentage of orange buckets sold out of total number of buckets sold.

Months	Number of black buckets sold	Ratio of number of black and pink buckets sold	% of number of orange buckets sold
June	90	3:4	40%
July	120	1:2	25%
August	168	6:7	35%
September	350	5:2	30%
October	80	2:3	20%

The number of orange buckets sold in September is how much more/less than the sum of the number of black and pink buckets sold in October together?

(A) 10 less (B) 20 more
(C) 10 more (D) 20 less
(E) None of these

Q32 Directions: Study the following information carefully and answer based on it.

The given table chart shows the number of black buckets in five different months i.e. June, July, August, September and October and also given the ratio of number of black and pink buckets sold in five different months, the percentage of orange buckets sold out of total number of buckets sold.

Months	Number of black buckets sold	Ratio of number of black and pink buckets sold	% of number of orange buckets sold
June	90	3:4	40%
July	120	1:2	25%
August	168	6:7	35%
September	350	5:2	30%
October	80	2:3	20%

In October, the selling price of each orange and black bucket is Rs. 80 and is Rs. 75 respectively. If all the buckets sold for Rs. 19600, then find the selling price of each pink bucket in October.

(A) Rs. 72 (B) Rs. 80
(C) Rs. 58 (D) Rs. 65
(E) None of these

Q33 Directions: Study the following information carefully and answer based on it.

The given table chart shows the number of black buckets in five different months i.e. June, July, August, September and October and also given the ratio of number of black and pink buckets sold in five different months, the

percentage of orange buckets sold out of total number of buckets sold.

Months	Number of black buckets sold	Ratio of number of black and pink buckets sold	% of number of orange buckets sold
June	90	3:4	40%
July	120	1:2	25%
August	168	6:7	35%
September	350	5:2	30%
October	80	2:3	20%

Number of black and pink buckets sold in September is what percentage is more than the total number of buckets sold in June ?

(A) 33% (B) 40%

(C) 28% (D) 38%

(E) None of these

Q34 Directions: Study the following information carefully and answer based on it.

The given table chart shows the number of black buckets in five different months i.e. June, July, August, September and October and also given the ratio of number of black and pink buckets sold in five different months, the percentage of orange buckets sold out of total number of buckets sold.

Months	Number of black buckets sold	Ratio of number of black and pink buckets sold	% of number of orange buckets sold
June	90	3:4	40%
July	120	1:2	25%
August	168	6:7	35%
September	350	5:2	30%
October	80	2:3	20%

If the number of black and pink buckets sold in November is 25% more than that of the number of black and pink buckets sold in July and the ratio of number of orange buckets sold in November and June is 5:7 respectively, then find the total number of buckets sold in November?

(A) 450 (B) 370

(C) 550 (D) 330

(E) None of these

Q35 Directions: In the table given below, details of candidates from five different states are mentioned. Read carefully all the instructions and answer the following questions

State	Candidates appeared in Online Exam	Candidates appeared in Offline Exam	Candidates who did not Complete exam (online & offline)
Punjab	440	45 %	105
New Delhi	320	36 %	120
Haryana	460	54 %	170
Manipur	500	60 %	90
Kerala	525	30 %	140

Note: Total candidates = candidates appeared in online exam + candidates appeared in offline exam

Find the ratio of the total number of candidates who appeared for online exams from Haryana and Manipur together to the total number of candidates who appeared for offline exams from Punjab and New Delhi together?

(A) 16: 9 (B) 8: 9

(C) 11: 5 (D) 9: 16

(E) None of these

Q36 Directions: In the table given below, details of candidates from five different states are mentioned. Read carefully all the instructions and answer the following questions

State	Candidates appeared in Online Exam	Candidates appeared in Offline Exam	Candidates who did not Complete exam (online & offline)
Punjab	440	45 %	105
New Delhi	320	36 %	120
Haryana	460	54 %	170
Manipur	500	60 %	90
Kerala	525	30 %	140

Note: Total candidates = candidates appeared in online exam + candidates appeared in offline exam

If the number of candidates who didn't complete the online exam and who didn't complete the offline exam from Manipur are equal, then the number of candidates who completed the offline exam from Manipur is approximately what percent more than the number of candidates who completed the online exam from the same city?

(A) 50 % (B) 55 %
(C) 60 % (D) 65 %
(E) None of these

Q37 Directions: In the table given below, details of candidates from five different states are mentioned. Read carefully all the instructions and answer the following questions

State	Candidates appeared in Online Exam	Candidates appeared in Offline Exam	Candidates who did not Complete exam (online & offline)
Punjab	440	45 %	105
New Delhi	320	36 %	120
Haryana	460	54 %	170
Manipur	500	60 %	90
Kerala	525	30 %	140

Note: Total candidates = candidates appeared in online exam + candidates appeared in offline exam

What is the difference between the total number of candidates who appeared in online and offline exams from all the states together?

(A) 190 (B) 200
(C) 180 (D) 210
(E) None of these

Q38 Directions: In the table given below, details of candidates from five different states are mentioned. Read carefully all the instructions and answer the following questions

State	Candidates appeared in Online Exam	Candidates appeared in Offline Exam	Candidates who did not Complete exam (online & offline)
Punjab	440	45 %	105
New Delhi	320	36 %	120
Haryana	460	54 %	170
Manipur	500	60 %	90
Kerala	525	30 %	140

Note: Total candidates = candidates appeared in online exam + candidates appeared in offline exam

What percentage of total candidates who took offline exams in Punjab and New Delhi are there in total candidates who took online exams in New Delhi?

(A) 167.75 % (B) 168 %
(C) 168.75 % (D) 169 %
(E) 170 %

Q39 Directions: In the table given below, details of candidates from five different states are mentioned. Read carefully all the instructions and answer the following questions

State	Candidates appeared in Online Exam	Candidates appeared in Offline Exam	Candidates who did not Complete exam (online & offline)
Punjab	440	45 %	105
New Delhi	320	36 %	120
Haryana	460	54 %	170
Manipur	500	60 %	90
Kerala	525	30 %	140

Note: Total candidates = candidates appeared in online exam + candidates appeared in offline exam

The total number of candidates who completed the exam from state Punjab is how much more/less than the total number of candidates who completed the exam from state Manipur?

(A) 400 (B) 450
(C) 465 (D) 500
(E) 550

Level-2

Q1 **Directions: Answer the questions based on the information given below.**

The given table shows the number of males, sum of number of males and females and ratio of number of males to the number of children, travelling to 3 different cities namely Nainital, Mussoorie and Shimla.

Note: For each city, total number of people travelling = Sum of number of males, females and children travelling to that city.

'Cities'	Number of males travelling	Sum of number of males and females travelling	Ratio of number of males travelling to number of children travelling
Nainital	480	840	3:1
Mussoorie	540	1080	9:2
Shimla	420	660	3:1

Number of males travelling to Mussoorie is how much percent more/less than the number of females travelling to Shimla?

(A) 175% (B) 225%
(C) 125% (D) 150%
(E) 100%

Q2 **Directions: Answer the questions based on the information given below.**

The given table shows the number of males, sum of number of males and females and ratio of number of males to the number of children, travelling to 3 different cities namely Nainital, Mussoorie and Shimla.

Note: For each city, total number of people travelling = Sum of number of males, females and children travelling to that city.

'Cities'	Number of males travelling	Sum of number of males and females travelling	Ratio of number of males travelling to number of children travelling
Nainital	480	840	3:1
Mussoorie	540	1080	9:2
Shimla	420	660	3:1

Number of children travelling to Mussoorie is how much percent less than the number of females travelling to Shimla?

(A) 120% (B) 60%
(C) 75% (D) 50%
(E) 40%

Q3 **Directions: Answer the questions based on the information given below.**

The given table shows the number of males, sum of number of males and females and ratio of number of males to the number of children, travelling to 3 different cities namely Nainital, Mussoorie and Shimla.

Note: For each city, total number of people travelling = Sum of number of males, females and children travelling to that city.

'Cities'	Number of males travelling	Sum of number of males and females travelling	Ratio of number of males travelling to number of children travelling
Nainital	480	840	3:1
Mussoorie	540	1080	9:2
Shimla	420	660	3:1

What is the ratio between the total number of people travelling to Mussoorie and Shimla,

respectively?

(A) 7:5 (B) 2:1

(C) 5:4 (D) 3:2

(E) 1:2

Q4 Directions: Answer the questions based on the information given below.

The given table shows the number of males, sum of number of males and females and ratio of number of males to the number of children, travelling to 3 different cities namely Nainital, Mussoorie and Shimla.

Note: For each city, total number of people travelling = Sum of number of males, females and children travelling to that city.

'Cities'	Number of males travelling	Sum of number of males and females travelling	Ratio of number of males travelling to number of children travelling
Nainital	480	840	3:1
Mussoorie	540	1080	9:2
Shimla	420	660	3:1

Find the difference between the total number of males travelling to Nainital and Shimla, together and the total number of females travelling to Mussoorie and Shimla, together.

(A) 180 (B) 140

(C) 120 (D) 200

(E) 100

Q5 Directions: Answer the questions based on the information given below.

The given table shows the number of males, sum of number of males and females and ratio of number of males to the number of children, travelling to 3 different cities namely Nainital, Mussoorie and Shimla.

Note: For each city, total number of people travelling = Sum of number of males, females and children travelling to that city.

'Cities'	Number of males travelling	Sum of number of males and females travelling	Ratio of number of males travelling to number of children travelling
Nainital	480	840	3:1
Mussoorie	540	1080	9:2
Shimla	420	660	3:1

If total number of people (male + female + children) travelling to another city 'Ooty' is 500 more than that to Nainital, such that ratio of number of males, females and children travelling to Ooty is 5:4:1, respectively, then find the number of females travelling to Ooty.

(A) 560 (B) 450

(C) 600 (D) 760

(E) 500

Directions (6-10) Read the following passage and answer the given questions.

Direction: Answer the questions according to the information given below.

The given table shows the total population and Adult (male + female) population percentage, and the remaining are children (boys + girls)

	Total population	Adult % (Male + Female)	Boys: girls
Village A	1400	60	2:3
Village B	1500	40	3:2
Village C	1800	75	7:3
Village D	1200	72	4:3
Village E	2100	48	7:6

Q6 If 40% of the adults are males in village A, then find the value of the total number of females and girls in the same village.

(A) 830 (B) 840

(C) 872 (D) 900
(E) 540

Q7 In village B the ratio of the number of females and the number of males is 2:1. 20% of females and 90% of girls are educated in village B. Find the approximate percentage of educated females and girls together out of the total population in village B.
(A) 18% (B) 22%
(C) 32% (D) 12.5%
(E) 27%

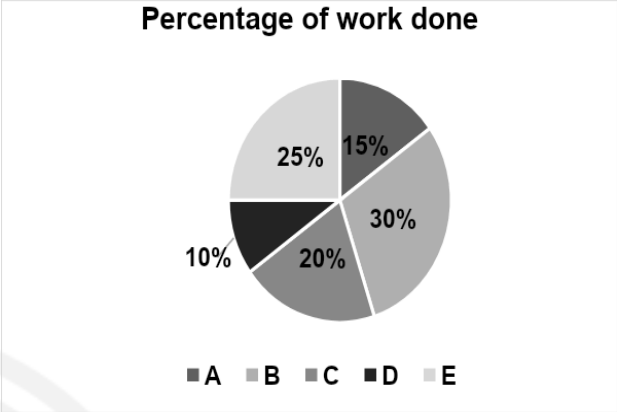
Q8 If the ratio of the number of males and the number of females in village C is 4:5, then the number of girls in village C is what percent of the number of males in the same village?
(A) 22.5% (B) 24.5%
(C) 18.5% (D) 15%
(E) None of these

Q9 In villages D and E the ratio of the number of males and the number of females are 7:5 and 1:2 respectively. What is the difference between the number of males in villages D and E?
(A) 120 (B) 136
(C) 140 (D) 158
(E) 168

Q10 What is the difference between the number of boys in village D and the number of boys in village B?
(A) 300 (B) 348
(C) 360 (D) 450
(E) None of these

Q11 Answer the questions based on the information given below.

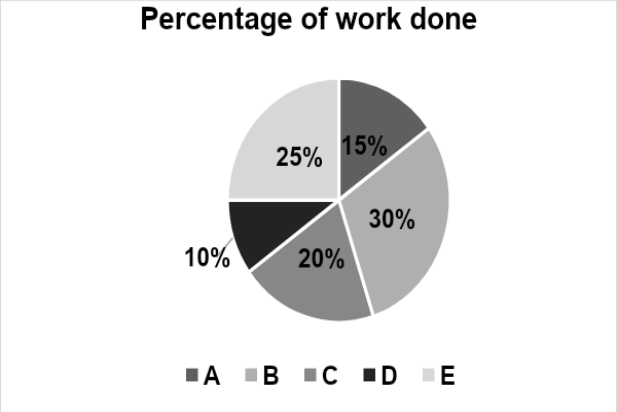
The pie chart given below shows the percentage of work done by five workers. Time taken by Aman, Baman, Chaman, David and Edrish and to complete their given percentage of work is 6 days, 12 days, 10 days, 6 days and 14 days respectively.



Chaman, Baman and David started the work working together, but Baman and Chaman left the work after 16 days and 10 days respectively after the start of work. Find the number of days taken to complete the work.
(A) 18 days (B) 20 days
(C) 22 days (D) 24 days
(E) 26 days

Q12 Answer the questions based on the information given below.

The pie chart given below shows the percentage of work done by five workers. Time taken by Aman, Baman, Chaman, David and Edrish and to complete their given percentage of work is 6 days, 12 days, 10 days, 6 days and 14 days respectively.

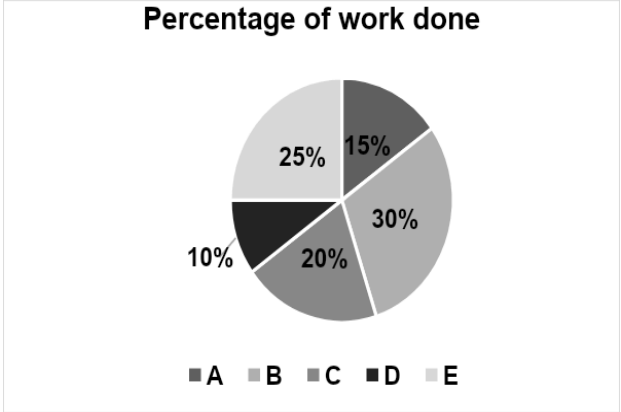


Edrish has to complete the work alone and the deadline given to her is same as the time taken by her to complete the whole work with her original efficiency. She started working, but after 16 days she realized that 80% of the work is still remaining. By what percentage she must increase her efficiency in the remaining days compared to her original efficiency to complete the whole work alone on time?

(A) 10%
(B) 12%
(C) 15%
(D) 18%
(E) 9%

Q13 Answer the questions based on the information given below.

The pie chart given below shows the percentage of work done by five workers. Time taken by Aman, Baman, Chaman, David and Edrish and to complete their given percentage of work is 6 days, 12 days, 10 days, 6 days and 14 days respectively.

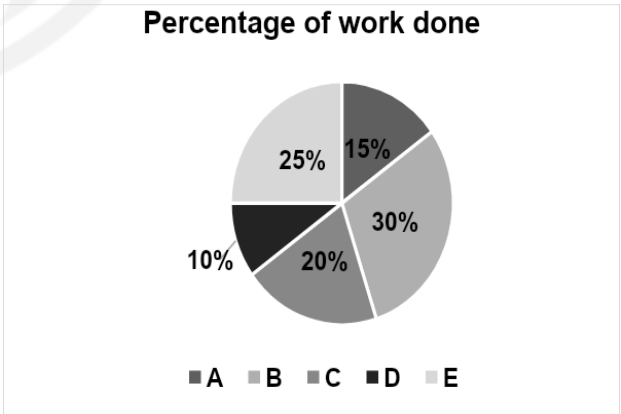


Out of the given pairs, who will complete the work in the minimum time while working together?

(A) David and Edrish
(B) Chaman and Baman
(C) Baman and Aman
(D) Aman and Edrish
(E) None of these

Q14 Answer the questions based on the information given below.

The pie chart given below shows the percentage of work done by five workers. Time taken by Aman, Baman, Chaman, David and Edrish and to complete their given percentage of work is 6 days, 12 days, 10 days, 6 days and 14 days respectively.



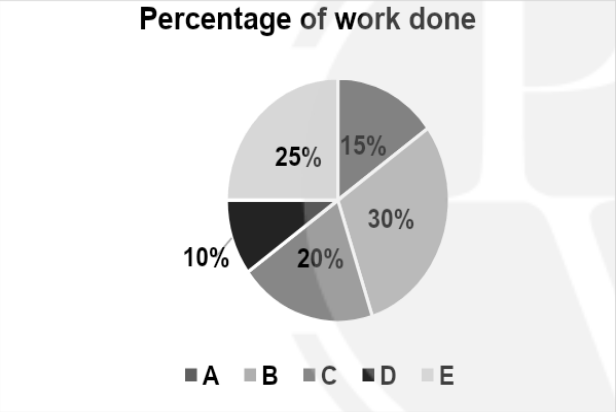
Work manager gave the deadline to finish the work in 54 days. David and Edrish started the work, worked for 40 days working on alternate

days, and then David left. Edrish worked for 4 more days and then left, and the remaining work is completed by Pankaj. Find the time taken by Pankaj to complete the whole work while working alone.

(A) 40 days (B) 42 days
(C) 44 days (D) 48 days
(E) 45 days

Q15 Answer the questions based on the information given below.

The pie chart given below shows the percentage of work done by five workers. Time taken by Aman, Baman, Chaman, David and Edrish and to complete their given percentage of work is 6 days, 12 days, 10 days, 6 days and 14 days respectively.



Chetan while working alone takes 12 days less than the number of days taken by David to complete the work alone, and Ketan is 30% less efficient than Edrish. Chetan and Ketan started working together, worked for 10 days, and then left. The remaining work is completed by David with 25% more efficiency. Find the number of days for which David worked.

(A) 22 days (B) 28 days
(C) 32 days (D) 25 days
(E) 40 days

Q16

Direction: Study the data carefully and answer the following questions.

A shopkeeper has 5 articles A, B, C, D and E and each article is of different cost. He marked up each article by a different amount and then gave different discounts on each article.

Table given below shows the following data.

Article	Cost price of the article (in ₹)	Marked up % on the article	Discount % given on marked price
A	2000	-	10%
B	800	-	-
C	-	16%	5%
D	1500	-	8%
E	2400	20%	-

Note: Some data in the table is missing, which needs to be calculated in the questions and missing data can be different for each question.

If article A is sold at 12.5% profit, ratio of selling price of article A to that of article B is 9: 4 and article B is sold at discount of $16\frac{2}{3}\%$ on its MP, then find the ratio of marked up amount of article B to the discount given on it?

(A) 4: 3 (B) 8: 3
(C) 2: 1 (D) 3: 2
(E) 5: 2

Q17 Direction: Study the data carefully and answer the following questions.

A shopkeeper has 5 articles A, B, C, D and E and each article is of different cost. He marked up each article by a different amount and then gave different discounts on each article.

Table given below shows the following data.

Article	Cost price of the article (in ₹)	Marked up % on the article	Discount % given on marked price
A	2000	-	10%
B	800	-	-
C	-	16%	5%
D	1500	-	8%
E	2400	20%	-

Note: Some data in the table is missing, which needs to be calculated in the questions and missing data can be different for each question.

If article A is sold at 12.5% profit, then what will be the ratio of marked up percent of article A to that of article E?

(A) 7: 5 (B) 3: 4
(C) 4: 5 (D) 6: 5
(E) 5: 4

Q18 Direction: Study the data carefully and answer the following questions.

A shopkeeper has 5 articles A, B, C, D and E and each article is of different cost. He marked up each article by a different amount and then gave different discounts on each article.

Table given below shows the following data.

Article	Cost price of the article (in ₹)	Marked up % on the article	Discount % given on marked price
A	2000	-	10%
B	800	-	-
C	-	16%	5%
D	1500	-	8%
E	2400	20%	-

Note: Some data in the table is missing, which needs to be calculated in the questions and missing data can be different for each question.

If average of cost prices of articles C, D and E is ₹1900 and profit received on article D is ₹165.6 less than that received on article C, then what will be the marked up percent of article D?

(A) 12% (B) 10%
(C) 15% (D) 8%
(E) 16%

Q19 Direction: Study the data carefully and answer the following questions.

A shopkeeper has 5 articles A, B, C, D and E and each article is of different cost. He marked up each article by a different amount and then gave different discounts on each article.

Table given below shows the following data.

Article	Cost price of the article (in ₹)	Marked up % on the article	Discount % given on marked price
A	2000	-	10%
B	800	-	-
C	-	16%	5%
D	1500	-	8%
E	2400	20%	-

Note: Some data in the table is missing, which needs to be calculated in the questions and missing data can be different for each question.

If marked price of article C is ₹20 more than that of article E, then what will be the profit received on article C?

(A) ₹255 (B) ₹250
(C) ₹215 (D) ₹240
(E) ₹235

Q20 Direction: Study the data carefully and answer the following questions.

A shopkeeper has 5 articles A, B, C, D and E and each article is of different cost. He marked up each article by a different amount and then gave different discounts on each article.

Table given below shows the following data.

Article	Cost price of the article (in ₹)	Marked up % on the article	Discount % given on marked price
A	2000	-	10%
B	800	-	-
C	-	16%	5%
D	1500	-	8%
E	2400	20%	-

Note: Some data in the table is missing, which needs to be calculated in the questions and missing data can be different for each question.

If marked up amount of article E is 120% more than that of article A and profit received on article E is 30% of that received on article A, then what will be the discount % given on article E?

(A) 12% (B) 10%
(C) 16% (D) 15%
(E) 14%

Q21 Direction: Study the data carefully and answer the following questions.

Data given below is related to the number of orders received by an ecommerce site in five different days Mon, Tue, Wed, Thu and Fri.

Table given below shows the following data.

Days	Total number of orders received	No. of orders received with next day delivery as % of total number of orders received
On Mon	180	$33\frac{1}{3}$%
Till Tue	450	48%
Till Wed	600	45%
Till Thu	840	50%
Till Fri	1000	48%

Note:

1. Total no. of orders received = No. of orders received with same day delivery + No. of orders received with next day delivery
2. Same day delivery means, the order is delivered on the same day as order received and next day delivery means, the order is delivered on next day as order received.

Total number of orders delivered on Tue is what percent of the total number of orders delivered on Fri?

(A) 69.6% (B) 108%
(C) 45.6% (D) 75.6%
(E) None of these

Q22 Direction: Study the data carefully and answer the following questions.

Data given below is related to the number of orders received by an ecommerce site in five different days Mon, Tue, Wed, Thu and Fri.

Table given below shows the following data.

Days	Total number of orders received	No. of orders received with next days delivery as % of total number of orders received
On Mon	180	$33\frac{1}{3}\%$
Till Tue	450	48%
Till Wed	600	45%
Till Thu	840	50%
Till Fri	1000	48%

Note:

1. Total no. of orders received = No. of orders received with same day delivery + No. of orders received with next day delivery
2. Same day delivery means, the order is delivered on the same day as order received and next day delivery means, the order is delivered on next day as order received.

Find the average number of orders with next day delivery received on each of the given days?

(A) 92 (B) 98
(C) 96 (D) 94
(E) None of these

Q23 Direction: Study the data carefully and answer the following questions.

Data given below is related to the number of orders received by an ecommerce site in five different days Mon, Tue, Wed, Thu and Fri.

Table given below shows the following data.

Days	Total number of orders received	No. of orders received with next days delivery as % of total number of orders received
On Mon	180	$33\frac{1}{3}\%$
Till Tue	450	48%
Till Wed	600	45%
Till Thu	840	50%
Till Fri	1000	48%

Note:

1. Total no. of orders received = No. of orders received with same day delivery + No. of orders received with next day delivery
2. Same day delivery means, the order is delivered on the same day as order received and next day delivery means, the order is delivered on next day as order received.

Find the difference between total number of orders with same day delivery received on Tue, Wed and Thu together and total number of orders with next day delivery on Tue, Wed and Thu together?

(A) 75 (B) 80
(C) 50 (D) 85
(E) 60

Q24 Direction: Study the data carefully and answer the following questions.

Data given below is related to the number of orders received by an ecommerce site in five different days Mon, Tue, Wed, Thu and Fri.

Table given below shows the following data.

Days	Total number of orders received	No. of orders received with next days delivery as % of total number of orders received
On Mon	180	$33\frac{1}{3}\%$
Till Tue	450	48%
Till Wed	600	45%
Till Thu	840	50%
Till Fri	1000	48%

Note:

1. Total no. of orders received = No. of orders received with same day delivery + No. of orders received with next day delivery
2. Same day delivery means, the order is delivered on the same day as order received and next day delivery means, the order is delivered on next day as order received.

If number of orders received on Sun with next day delivery is 24, then find the ratio of total orders delivered on Mon to the total number of orders delivered on Thu?

(A) 12: 13 (B) 1: 1

(C) 3: 2 (D) 16: 15

(E) None of these

Q25 **Direction: Study the data carefully and answer the following questions.**

Data given below is related to the number of orders received by an ecommerce site in five different days Mon, Tue, Wed, Thu and Fri.

Table given below shows the following data.

Days	Total number of orders received	No. of orders received with next days delivery as % of total number of orders received
On Mon	180	$33\frac{1}{3}\%$
Till Tue	450	48%
Till Wed	600	45%
Till Thu	840	50%
Till Fri	1000	48%

Note:

1. Total no. of orders received = No. of orders received with same day delivery + No. of orders received with next day delivery
2. Same day delivery means, the order is delivered on the same day as order received and next day delivery means, the order is delivered on next day as order received.

If number of orders with same day delivery received on Sat is 75% of that received on Wed and number of orders with next day delivery received on Sat is 50% of that received on Tue, then total number of orders received on Sat is what percent of that received on Fri?

(A) 93.75% (B) 83.33%

(C) 96.5% (D) 90%

(E) None of these

Q26 Direction: **Study the data carefully and answer the following questions.**

In a school, a teacher teaches in 5 different classes A, B, C, D and E and number of students in each class is different.

Table given below shows the average age of each class with the teacher.

Class	Average age of the class with the teacher	Sum of ages of the students without the teacher
A	17.5 years	240 years
B	15.3 years	266 years
C	14.8 years	108 years
D	$16\frac{2}{3}$ years	210 years
E	20 years	380 years

Note:

1. Average age of the class = (sum of thestudents in the class+age of the teacher) / (total number of students in the class+teacher)
2. Ratio of number of students in class A to those in class C is 5: 3.

Average age of class D without the teacher, is what percent of that of class A without the teacher?

(A) 93.75% (B) 86.67%

(C) 92.5% (D) 83.33%

(E) None of these

Q27 Direction: Study the data carefully and answer the following questions.

In a school, a teacher teaches in 5 different classes A, B, C, D and E and number of students in each class is different.

Table given below shows the average age of each class with the teacher.

Class	Average age of the class with the teacher	Sum of ages of the students without the teacher
A	17.5 years	240 years
B	15.3 years	266 years
C	14.8 years	108 years
D	$16\frac{2}{3}$ years	210 years
E	20 years	380 years

Note:

1. Average age of the class = (sum of thestudents in the class+age of the teacher) / (total number of students in the class+teacher)
2. Ratio of number of students in class A to those in class C is 5: 3.

Find the ratio of total number of students in class A to the total number of students in class E?

(A) 5: 6 (B) 2: 3

(C) 5: 9 (D) 6: 7

(E) None of these

Q28 Direction: Study the data carefully and answer the following questions.

In a school, a teacher teaches in 5 different classes A, B, C, D and E and number of students in each class is different.

Table given below shows the average age of each class with the teacher.

Class	Average age of the class with the teacher	Sum of ages of the students without the teacher
A	17.5 years	240 years
B	15.3 years	266 years
C	14.8 years	108 years
D	$16\frac{2}{3}$ years	210 years
E	20 years	380 years

Note:

1. Average age of the class = (sum of thestudents in the class+age of the teacher) / (total number of students in the class+teacher)
2. Ratio of number of students in class A to those in class C is 5: 3.

If all the students of class A are merged with all the students of class D, then what will be the approximate average age of the students of classes A and D?

(A) 17.5 years (B) 15.5 years
(C) 22.5 years (D) 13.5 years
(E) None of these

Q29 Direction: Study the data carefully and answer the following questions.

In a school, a teacher teaches in 5 different classes A, B, C, D and E and number of students in each class is different.

Table given below shows the average age of each class with the teacher.

Class	Average age of the class with the teacher	Sum of ages of the students without the teacher
A	17.5 years	240 years
B	15.3 years	266 years
C	14.8 years	108 years
D	$16\frac{2}{3}$ years	210 years
E	20 years	380 years

Note:

1. Average age of the class = (sum of thestudents in the class+age of the teacher) / (total number of students in the class+teacher)
2. Ratio of number of students in class A to those in class C is 5: 3.

If sum of ages of the students in class F is 34 years more than that of the students in class B and ratio of number of students in class A to those in class F is 5: 4, then find the average age of class F without the teacher?

(A) 18 years (B) 25 years
(C) 20 years (D) 16 years
(E) None

Q30 Direction: Study the data carefully and answer the following questions.

In a school, a teacher teaches in 5 different classes A, B, C, D and E and number of students in each class is different.

Table given below shows the average age of each class with the teacher.

Class	Average age of the class with the teacher	Sum of ages of the students without the teacher
A	17.5 years	240 years
B	15.3 years	266 years
C	14.8 years	108 years
D	$16\frac{2}{3}$ years	210 years
E	20 years	380 years

Note:

1. Average age of the class with the teacher = (sum of thestudents in the class+age of the teacher) / (total number of students in the class+teacher)
2. Ratio of number of students in class A to those in class C is 5: 3.

What is the difference between average age of class C without the teacher and average age of class E without the teacher?

(A) 2 years (B) 7 years
(C) 4 years (D) 5 years
(E) None of these

Level-3

Q1 **Directions:** Answer the questions based on the information given below.

Different numbers of people booked tickets in five different buses. The table given below shows the total number of available seats, percentage of vacant seats and the ratio of number of males to females who booked their tickets.

Note: One person can book only one ticket.

Bus	Total number of available seats	Percentage of vacant seats	Ratio of number of males to females who booked tickets
A	-	35%	4:3
B	-	20%	4:5
C	-	15%	11:8
D	1750	-	5:2
E	1050	12%	-

If the ratio of number of seats available in bus A to C is 28:19, and the difference between the number of male who booked tickets in these two buses is 42, then find the difference between the number of females who booked tickets in these two buses.

(A) 45 (B) 40
(C) 33 (D) 54
(E) None of these

Q2 **Directions:** Answer the questions based on the information given below.

Different numbers of people booked tickets in five different buses. The table given below shows the total number of available seats, percentage of vacant seats and the ratio of number of males to females who booked their tickets.

Note: One person can book only one ticket.

Bus	Total number of available seats	Percentage of vacant seats	Ratio of number of males to females who booked tickets
A	-	35%	4:3
B	-	20%	4:5
C	-	15%	11:8
D	1750	-	5:2
E	1050	12%	-

If the total number of seats available in bus C is 2660 and the number of males who booked tickets in bus E is 20% more than the number of females who booked tickets in bus E. Find the total number of males who booked tickets in bus C and E.

(A) 1218 (B) 1813
(C) 2190 (D) 2371
(E) 2185

Q3 **Directions:** Answer the questions based on the information given below.

Different numbers of people booked tickets in five different buses. The table given below shows the total number of available seats, percentage of vacant seats and the ratio of number of males to females who booked their tickets.

Note: One person can book only one ticket.

Bus	Total number of available seats	Percentage of vacant seats	Ratio of number of males to females who booked tickets
A	-	35%	4:3
B	-	20%	4:5
C	-	15%	11:8
D	1750	-	5:2
E	1050	12%	-

If the ratio of total number of seats available in bus A and the same in bus C is 21:19, respectively and sum of number of males who booked tickets in bus A and number of females who booked tickets in bus C is 2044 then find the average of number of seats available in bus A and bus C.

(A) 2800 (B) 2500
(C) 2300 (D) 2000
(E) None of these

Q4 **Directions:** Answer the questions based on the information given below.

Different numbers of people booked tickets in five different buses. The table given below shows the total number of available seats, percentage of vacant seats and the ratio of number of males to females who booked their tickets.

Note: One person can book only one ticket.

Bus	Total number of available seats	Percentage of vacant seats	Ratio of number of males to females who booked tickets
A	-	35%	4:3
B	-	20%	4:5
C	-	15%	11:8
D	1750	-	5:2
E	1050	12%	-

Total number of vacant seats in bus D is 16%. Total number of seats available in bus B is 20% more than the number of males who booked seats in bus D. Number of females who booked tickets in bus D is how much percent more/less than the same in bus B.

(A) 30% (B) 33%
(C) 25% (D) 40%
(E) None of these

Q5 **Directions:** Answer the questions based on the information given below.

Different numbers of people booked tickets in five different buses. The table given below shows the total number of available seats, percentage of vacant seats and the ratio of number of males to females who booked their tickets.

Note: One person can book only one ticket.

Bus	Total number of available seats	Percentage of vacant seats	Ratio of number of males to females who booked tickets
A	-	35%	4:3
B	-	20%	4:5
C	-	15%	11:8
D	1750	-	5:2
E	1050	12%	-

If the ratio of number of males to females who booked tickets in bus E is 4:3. Total number of seats available in bus B is 350% more than the number of males who booked tickets in bus E. If the number of seats vacant in bus B is 25% instead of 20%, then find the number of females who booked tickets in bus B.

(A) 780 (B) 800
(C) 990 (D) 870
(E) None of these

Q6 Direction: Study the following information and answer the question given below.
The table below shows the sum invested by different people, rate of interest, time, the total amount they received, and the compound interest they received at the end. Some data is missing.

Person	Principal (Rs)	Rate of interest (r%)	Time period (n) in years	Total amount received (Rs)	Compound interest (Rs)
Simran	-	5 %	-	22050	-
Mahendra	-	-	3	-	19860
Gita	80000	8 %	2	-	-
Vinita	30000	7 %	-	-	6751.29
Srinivas	-	-	2	56180	-
Pankaj	40000	8 %	2	-	-

If the principal amount invested by Vinita and Srinivas is in the ratio of 3: 5, then what is the rate of interest for Srinivas (interest compounded annually)?

(A) 4% (B) 6%
(C) 5% (D) 8%
(E) None of these

Q7 Direction: Study the following information and answer the questions given below.
The table below shows the sum invested by different people, rate of interest, time, the total amount they received, and the compound interest they received at the end. Some data is missing.

Person	Principal (Rs)	Rate of interest (r%)	Time period (n) in years	Total amount received (Rs)	Compound interest (Rs)
Simran	-	5 %	-	22050	-
Mahendra	-	-	3	-	19860
Gita	80000	8 %	2	-	-
Vinita	30000	7 %	-	-	6751.29
Srinivas	-	-	2	56180	-
Pankaj	40000	8 %	2	-	-

How much amount is received by Pankaj if the interest is compounded annually?

(A) Rs 52474 (B) Rs 42828
(C) Rs54332 (D) Rs46656
(E) None of these

Q8 **Direction: Study the following information and answer the questions given below.**
The table below shows the sum invested by different people, rate of interest, time, total amount they received and the compound interest they received at the end. Some data is missing.

Person	Principal (Rs)	Rate of interest (r%)	Time period (n) in years	Total amount received (Rs)	Compound interest (Rs)
Simran	-	5 %	-	22050	-
Mahendra	-	-	3	-	19860
Gita	80000	8 %	2	-	-
Vinita	30000	7 %	-	-	6751.29
Srinivas	-	-	2	56180	-
Pankaj	40000	8 %	2	-	-

What is the average of the principal amount invested by Pankaj, Vinita, Mahendra, and Gita, if the rate of interest for Simran is half of the rate of interest for Mahendra (if the interest is compounded annually)?

(A) Rs 52500 (B) Rs 48800
(C) Rs 50000 (D) Rs 54400
(E) None of these

Q9 Direction: Study the following information and answer the questions given below.
The table below shows the sum invested by different people, rate of interest, time, the total amount they received, and the compound interest they received at the end. Some data is missing.

Person	Principal (Rs)	Rate of interest (r%)	Time period (n) in years	Total amount received (Rs)	Compound interest (Rs)
Simran	-	5 %	-	22050	-
Mahendra	-	-	3	-	19860
Gita	80000	8 %	2	-	-
Vinita	30000	7 %	-	-	6751.29
Srinivas	-	-	2	56180	-
Pankaj	40000	8 %	2	-	-

If Simran invested half of the principal amount invested by Pankaj, then for how many years Simran invested the principal amount (if interest is compounded annually)?
(A) 3 years (B) 1 years
(C) 5 years (D) 4 years
(E) 2 years

Q10 Directions : Study the following information and answer the following question.
The table shows the 5 articles – A, B, C, D and E, MRP, Profit percentage, discount percentage and selling price. Some values are missing in the table.

Article	MRP	Profit%	Discount%	Selling price
A	9160	35%	---	---
B	---	---	15%	2650
C	---	10%	20%	4840
D	7800	---	18%	---
E	---	30%	25%	---

If the Discount of article A is Rs.840 more than the discount on article C then find the ratio of selling price of article A to article D.
(A) 1185:1066 (B) 1066:1185
(C) 985:576 (D) 576:985
(E) none of these

Q11 Directions : Study the following information and answer the following question.
The table shows the 5 articles – A, B, C, D and E, MRP, Profit percentage, discount percentage and selling price. Some values are missing in the table.

Article	MRP	Profit%	Discount%	Selling price
A	9160	35%	---	---
B	---	---	15%	2650
C	---	10%	20%	4840
D	7800	---	18%	---
E	---	30%	25%	---

If the MRP of article B is 75% above its cost price, then find out the profit percentage of this article.
(A) 42.25% (B) 48.75%
(C) 48.25% (D) 42.75%
(E) none of these

Q12 Directions : Study the following information and answer the following question.
The table shows the 5 articles – A, B, C, D and E, MRP, Profit percentage, discount percentage and selling price. Some values are missing in the table.

Article	MRP	Profit%	Discount%	Selling price
A	9160	35%	---	---
B	---	---	15%	2650
C	---	10%	20%	4840
D	7800	---	18%	---
E	---	30%	25%	---

If the profit obtained on article E is Rs.2130, then the MRP of article E is how much percentage more than MRP of article D.

(A) 55.77% (B) 56.77%
(C) 57.77% (D) 58.77%
(E) none of these

Q13 Directions : Study the following information and answer the following question.
The table shows the 5 articles – A, B, C, D and E, MRP, Profit percentage, discount percentage and selling price. Some values are missing in the table.

Article	MRP	Profit%	Discount%	Selling price
A	9160	35%	---	---
B	---	---	15%	2650
C	---	10%	20%	4840
D	7800	---	18%	---
E	---	30%	25%	---

Find out the difference between the MRP and cost price of article C.
(A) Rs.1630 (B) Rs.1640
(C) Rs.1650 (D) Rs.1660
(E) none of these

Q14 Directions : Study the following information and answer the following question.
The table shows the 5 articles – A, B, C, D and E, MRP, Profit percentage, discount percentage and selling price. Some values are missing in the table.

Article	MRP	Profit%	Discount%	Selling price
A	9160	35%	---	---
B	---	---	15%	2650
C	---	10%	20%	4840
D	7800	---	18%	---
E	---	30%	25%	---

If the MRP of article E is Rs.5410 more than the selling price of article B, then find out the cost price of article E.
(A) Rs.4610 (B) Rs.4630
(C) Rs.4650 (D) Rs.4670
(E) None of these

Directions (15-19) Read the following passage and answer the given questions.
Directions: The given table shows the number of male adults out of the total adult population (male + female) in 4 different cities. The table also shows the percentage distribution of children out of the total population. The population consists of adults and children.
Note:
(I) Total adult males in 4 cities together is 2700
(II) The ratio of adult males to adult females in cities B, C, and D are 81:55, 3: 1 and 27: 8 respectively.

City	Male Adult	Children %
A	40P	20
B	30P	15
C	50P	25
D	80P	30

Q15 If the total population of city A is 4 times the female adults of city C, find the difference between female adult students and children of city A is the ratio between female adult students and adult housewives of city A is 7:5. Adult females consist of only female students and housewives.
(A) 45 (B) 50
(C) 60 (D) 75
(E) 80

Q16 In city E, the male adults are 20% more than the female adults in city C and the children in city E are equal to the sum of children in city B and C and children in city E are 14% of the total population of city E, then what is the number of female adults in city E?

(A) 2415 (B) 2018
(C) 2310 (D) 2750
(E) 2580

Q17 In city D out of the total male adults, $33\frac{1}{3}\%$ are literate, and out of the total female adults 25% are literate and out of the total children 30% are 5 years and below 5 years, so find the number of the illiterate adult population of city D is how much percent more or less than the children above 5 years old in city D?
(A) 128.57 (B) 120.50%
(C) 100% (D) 95%
(E) none of these

Q18 What is the difference between the total adult females in City B and C together and the total children in City C and D together?
(A) 475 (B) 600
(C) 250 (D) 300
(E) 400

Q19 What is the average number of children in Cities B, C, and D?
(A) 320 (B) 340
(C) 360 (D) 400
(E) 420

Answer Key

Level-1

Q1	(B)
Q2	(C)
Q3	(B)
Q4	(E)
Q5	(A)
Q6	(C)
Q7	(B)
Q8	(E)
Q9	(B)
Q10	(B)
Q11	(D)
Q12	(B)
Q13	(D)
Q14	(C)
Q15	(B)
Q16	(B)
Q17	(E)
Q18	(A)
Q19	(E)
Q20	(E)
Q21	(C)
Q22	(A)
Q23	(C)
Q24	(A)
Q25	(E)
Q26	(B)
Q27	(A)
Q28	(A)
Q29	(D)
Q30	(A)
Q31	(C)
Q32	(B)
Q33	(B)
Q34	(C)
Q35	(A)
Q36	(B)
Q37	(A)
Q38	(C)
Q39	(C)

Level-2

Q1	(C)	Q16	(C)
Q2	(D)	Q17	(E)
Q3	(D)	Q18	(B)
Q4	(C)	Q19	(A)
Q5	(C)	Q20	(D)
Q6	(B)	Q21	(A)
Q7	(E)	Q22	(C)
Q8	(A)	Q23	(E)
Q9	(E)	Q24	(B)
Q10	(B)	Q25	(A)
Q11	(D)	Q26	(A)
Q12	(B)	Q27	(E)
Q13	(C)	Q28	(B)
Q14	(B)	Q29	(B)
Q15	(C)	Q30	(B)

Level-3

Q1	(B)	Q11	(B)
Q2	(B)	Q12	(C)
Q3	(A)	Q13	(C)
Q4	(C)	Q14	(C)
Q5	(C)	Q15	(D)
Q6	(B)	Q16	(C)
Q7	(D)	Q17	(A)
Q8	(A)	Q18	(E)
Q9	(E)	Q19	(B)
Q10	(A)		

Hints & Solutions

Level-1

Q1 Text Solution:

According to question,

Departments	Total number of employees	Number of males	Number of females
Accounts	864	5/9 × 864 = 480	864 - 480 = 384
Security	624	7/13 × 624 = 336	624 - 336 = 288
IT	936	5/13 × 936 = 360	936 - 360 = 576
Finance	630	4/7 × 630 = 360	630 - 360 = 270
HR	528	5/11 × 528 = 240	528 - 240 = 288
Marketing	600	3/5 × 600 = 360	600 - 360 = 240

Desired Ratio = 336:240 = 7:5

∴ The answer is 7:5.

Q2 Text Solution:

According to question,

Departments	Total number of employees	Number of males	Number of females
Accounts	864	5/9 × 864 = 480	864 - 480 = 384
Security	624	7/13 × 624 = 336	624 - 336 = 288
IT	936	5/13 × 936 = 360	936 - 360 = 576
Finance	630	4/7 × 630 = 360	630 - 360 = 270
HR	528	5/11 × 528 = 240	528 - 240 = 288
Marketing	600	3/5 × 600 = 360	600 - 360 = 240

Desired Average = (270 + 288)÷2 = 279

Hence, the correct option is C.

Q3 Text Solution:

According to question,

Departments	Total number of employees	Number of males	Number of females
Accounts	864	5/9 × 864 = 480	864 - 480 = 384
Security	624	7/13 × 624 = 336	624 - 336 = 288
IT	936	5/13 × 936 = 360	936 - 360 = 576
Finance	630	4/7 × 630 = 360	630 - 360 = 270
HR	528	5/11 × 528 = 240	528 - 240 = 288
Marketing	600	3/5 × 600 = 360	600 - 360 = 240

Desired Percentage = [(480 – 360)÷480] × 100 = 25%

Hence, the correct option is B.

Q4 Text Solution:

According to question,

Departments	Total number of employees	Number of males	Number of females
Accounts	864	5/9 × 864 = 480	864 - 480 = 384
Security	624	7/13 × 624 = 336	624 - 336 = 288
IT	936	5/13 × 936 = 360	936 - 360 = 576
Finance	630	4/7 × 630 = 360	630 - 360 = 270
HR	528	5/11 × 528 = 240	528 - 240 = 288
Marketing	600	3/5 × 600 = 360	600 - 360 = 240

Desired difference = 288 – 288 = 0

Hence, the correct option is E.

Q5 Text Solution:

According to question,

Departments	Total number of employees	Number of males	Number of females
Accounts	864	5/9 × 864 = 480	864 - 480 = 384
Security	624	7/13 × 624 = 336	624 - 336 = 288
IT	936	5/13 × 936 = 360	936 - 360 = 576
Finance	630	4/7 × 630 = 360	630 - 360 = 270
HR	528	5/11 × 528 = 240	528 - 240 = 288
Marketing	600	3/5 × 600 = 360	600 - 360 = 240

Total number of females in IT= 576

Q6 Text Solution:

Total number of TV produced by all the companies together

= 2119 + 3065 + 1258 + 2028 + 3000

= 11,470

Required average = $\frac{11470}{5}$

= 2294

∴ The answer is 2294.

Q7 Text Solution:

Total number of products produced by company R

= 4839 + 3158 + 1258 + 1745

= 11,000

Total number of products produced by company Q

= 3850 + 3265 + 3065 + 1820

= 12,000

Required Difference = 12,000 – 11,000

= 1000

∴ The answer is 1000.

Q8 Text Solution:

Total number of Washing Machine produced by company B and AC produced by company S together

= 3850 + 1250

= 5100

Total number of TV produces by company T

= 3000

Required Percentage = $\frac{5100-3000}{3000} \times 100$

= $\frac{2100}{3000} \times 100$

= 70 %

∴ The answer is 70%,

Q9 Text Solution:

Total number of Washing Machine produced by Q and S together

= 3850 + 2690 = 6540

Total number of Cooler produced by P and Q together

= 3545 + 3265 = 6810

Required ratio = 6540 : 6810

= 218 : 227

∴ The answer is 218: 227

Q10 Text Solution:

Number of Washing Machine produced by T that remains unsold

= $\frac{40}{100} \times 3750$

= 1500

Number of AC produced by Q that remains unsold

= $\frac{60}{100} \times 1820$

= 1092

Required Percentage = $\frac{1092}{1500} \times 100$

= 72.8 %

∴ The answer is 72.8%.

Q11 Text Solution:

Total number of votes casted in village P $= 15500 \times \frac{85}{100} = 13175$

Total number of valid votes $= 13157 \times \frac{80}{100} = 10540$

Number of valid votes got by the person who lost $= 10540 \times \frac{45}{100} = 4743$

Q12 Text Solution:

Total votes casted in village Q $= 14500 \times \frac{85}{100} = 12325$

Total valid votes casted in village Q $= 12325 \times \frac{75}{100} = 9243\frac{3}{4}$

Total votes got by winner in village Q $= 9243.75 \times \frac{70}{100} = 6470.625$

Total votes got by looser $= 9243.75 \times \frac{30}{100} = 2773.125$

Difference between votes of winner and loser $= 6470.625 - 2773.125 = 3697\frac{1}{2}$

Q13 Text Solution:

Total number of valid votes casted in village M $= 12500 \times \frac{85}{100} \times \frac{70}{100} = 7437\frac{1}{2}$

Total number of valid votes casted in village N $= 16000 \times \frac{85}{100} \times \frac{65}{100} = 8840$

Total number of valid votes casted in village O $= 9000 \times \frac{85}{100} \times \frac{85}{100} = 6502\frac{1}{2}$

Average of valid votes casted in village M, N, and O $= \frac{7437.5+8840+6502.5}{3} = 7593\frac{1}{3}$

Q14 Text Solution:

Total number of votes casted in village N $= 16000 \times \frac{85}{100} = 13600$

Total number of invalid votes casted in village N $= 13600 \times \frac{35}{100} = 4760$

Total number of votes casted in village M $= 12500 \times \frac{85}{100} = 10625$

Total valid votes casted in village M $= 10625 \times \frac{70}{100}$

Required rato $= \frac{4760 \times 10}{10625 \times 7} = \frac{16}{25} = 16 : 25$

Q15 Text Solution:

Required ratio =

$\left(\frac{35-20}{100} \times 8000 \times \frac{50}{100} \times \frac{3}{5}\right)$

$: \left(\frac{90-60}{100} \times 8000 \times \frac{70}{100} \times \frac{4}{7}\right)$

= 360:960

= 3:8

Q16 Text Solution:

Number of mouse sold on Flipkart in April = $\frac{35-20}{100} \times 8000 \times \frac{50}{100}$ = 600

Number of mouse sold on Flipkart in June = $\frac{90-60}{100} \times 8000 \times \frac{30}{100}$ = 720

Required difference = 720 – 600 = 120

Q17 Text Solution:

Number of mouse sold on Snapdeal in March = $\frac{20}{100} \times 8000 \times \frac{55}{100} \times \frac{5}{11}$

= 400

Number of mouse sold on Snapdeal in April = $\frac{35-20}{100} \times 8000 \times \frac{50}{100} \times \frac{2}{5}$

= 240

Number of mouse sold on Snapdeal in May = $\frac{60-35}{100} \times 8000 \times \frac{60}{100} \times \frac{5}{12}$

= 500

Number of mouse sold on Snapdeal in June = $\frac{90-60}{100} \times 8000 \times \frac{70}{100} \times \frac{3}{7}$

= 720

Number of mouse sold on Snapdeal in July = $(100 - 90) \times 8000 \times \frac{40}{100} \times \frac{3}{8}$

= 120

Required Average = $\frac{400+240+500+720+120}{5}$

= 396

Q18 Text Solution:

Number of mouse sold on Flipkart in July = $\frac{100-90}{100} \times 8000 \times \frac{60}{100}$ = 480

Number of mouse sold on Flipkart in March = $\frac{20}{100} \times 8000 \times \frac{45}{100}$ = 720

Number of mouse sold on Flipkart in May = $\frac{60-35}{100} \times 8000 \times \frac{40}{100}$ = 800

Required total = 480 + 720 + 800 = 2000

Q19 Text Solution:

Number of mouse manufactured in August = $\frac{140}{100} \times \frac{60-35}{100} \times 8000$ = 2800

Number of mouse sold on Amazon in August = 2800 × $\frac{1}{7}$ = 400

Number of mouse sold on Amazon in March = $\frac{20}{100} \times 8000 \times \frac{55}{100} \times \frac{6}{11}$
= 480

Difference = 480 – 400 = 80

Q20 Text Solution:

Shop A,

Total number of articles = 80 × 3 = 240

Number of article Z = 30% of 240 = 72

Total number of article = X + Y = 240 – 72 = 168 .....(i)

If X – Y = 8 .....(ii)

X = 88, Y = 80

If Y – X = 8.....(iii)

Solving (i) and (iii)

Y = 88, X = 80

Shop B,

Total number of articles = 75 ×3 = 225

Number of article Z = 20% of 225 = 45

Total number of article = X + Y = 225 – 45 = 180.....(i)

If X – Y = 40.....(ii)

Solving (i) and (ii)

X = 110, Y = 70

If Y – X = 40.....(iii)

Solving (i) and (iii)

Y = 110, X= 70

Shop C,

Total number of articles = 60 × 3 = 180

Number of article Z = 55% of 180 = 99

Total number of articles = X + Y = 180 – 99 = 81..... (i)

If X – Y = 9.....(ii)

Solving (i) and (ii)

X = 45, Y = 36

If Y – X = 9.....(iii)

Solving (i) and (iii)

Y = 45, X = 36

Shop D,

Total number of articles = 90 × 3 = 270

Number of article Z = 30% of 270 = 81

Total number of articles = X + Y = 270 – 81 = 189.....(i)

If X – Y = 11.....(ii)

Solving (i) and (ii)

X = 100, Y = 89

If Y – X = 11.....(iii)

Solving (i) and (iii)

Y = 100, X = 89

Required answer = $\frac{72+45+99}{240+225+180} \times 100$ = 33.48% ≈ 33%

Q21 Text Solution:

Shop A,

Total number of articles = 80 × 3 = 240

Number of article Z = 30% of 240 = 72

Total number of article = X + Y = 240 – 72 = 168 .....(i)

If X – Y = 8 .....(ii)

X = 88, Y = 80

If Y – X = 8.....(iii)

Solving (i) and (iii)

Y = 88, X = 80

Shop B,

Total number of articles = 75 ×3 = 225

Number of article Z = 20% of 225 = 45

Total number of article = X + Y = 225 – 45 = 180.....(i)

If X – Y = 40.....(ii)

Solving (i) and (ii)

X = 110, Y = 70

If Y – X = 40.....(iii)

Solving (i) and (iii)

Y = 110, X= 70

Shop C,

Total number of articles = 60 × 3 = 180

Number of article Z = 55% of 180 = 99

Total number of articles = X + Y = 180 – 99 = 81..... (i)

If X – Y = 9.....(ii)

Solving (i) and (ii)

X = 45, Y = 36

If Y – X = 9.....(iii)

Solving (i) and (iii)

Y = 45, X = 36

Shop D,

Total number of articles = 90 × 3 = 270

Number of article Z = 30% of 270 = 81

Total number of articles = X + Y = 270 – 81 = 189.....(i)

If X – Y = 11.....(ii)

Solving (i) and (ii)

X = 100, Y = 89

If Y – X = 11.....(iii)

Solving (i) and (iii)

Y = 100, X = 89

Maximum number of article X in shops A, B and D = 88 + 110 + 100

= 298

Q22 Text Solution:

Shop A,

Total number of articles = 80 × 3 = 240

Number of article Z = 30% of 240 = 72

Total number of article = X + Y = 240 – 72 = 168 .....(i)

If X – Y = 8 .....(ii)

X = 88, Y = 80

If Y – X = 8.....(iii)

Solving (i) and (iii)

Y = 88, X = 80

Shop B,

Total number of articles = 75 ×3 = 225

Number of article Z = 20% of 225 = 45

Total number of article = X + Y = 225 – 45 = 180.....(i)

If X – Y = 40.....(ii)

Solving (i) and (ii)

X = 110, Y = 70

If Y – X = 40.....(iii)

Solving (i) and (iii)

Y = 110, X= 70

Shop C,

Total number of articles = 60 × 3 = 180

Number of article Z = 55% of 180 = 99

Total number of articles = X + Y = 180 – 99 = 81..... (i)

If X – Y = 9.....(ii)

Solving (i) and (ii)

X = 45, Y = 36

If Y – X = 9.....(iii)

Solving (i) and (iii)

Y = 45, X = 36

Shop D,

Total number of articles = 90 × 3 = 270

Number of article Z = 30% of 270 = 81

Total number of articles = X + Y = 270 – 81 = 189.....(i)

If X – Y = 11.....(ii)

Solving (i) and (ii)

X = 100, Y = 89

If Y – X = 11.....(iii)

Solving (i) and (iii)

Y = 100, X = 89

Required percentage = $\frac{(110+100)-(80+70)}{80+70} \times 100$

= $\frac{210-150}{150} \times 100 = 40\%$

Q23 Text Solution:

Shop A,

Total number of articles = 80 × 3 = 240

Number of article Z = 30% of 240 = 72

Total number of article = X + Y = 240 – 72 = 168 .....(i)

If X – Y = 8 .....(ii)

X = 88, Y = 80

If Y – X = 8.....(iii)

Solving (i) and (iii)

Y = 88, X = 80

Shop B,

Total number of articles = 75 ×3 = 225
Number of article Z = 20% of 225 = 45
Total number of article = X + Y = 225 – 45 = 180.....(i)
If X – Y = 40.....(ii)
Solving (i) and (ii)
X = 110, Y = 70
If Y – X = 40.....(iii)
Solving (i) and (iii)
Y = 110, X= 70

Shop C,

Total number of articles = 60 × 3 = 180
Number of article Z = 55% of 180 = 99
Total number of articles = X + Y = 180 – 99 = 81..... (i)
If X – Y = 9.....(ii)
Solving (i) and (ii)
X = 45, Y = 36
If Y – X = 9.....(iii)
Solving (i) and (iii)
Y = 45, X = 36

Shop D,

Total number of articles = 90 × 3 = 270
Number of article Z = 30% of 270 = 81
Total number of articles = X + Y = 270 – 81 = 189.....(i)
If X – Y = 11.....(ii)
Solving (i) and (ii)
X = 100, Y = 89
If Y – X = 11.....(iii)
Solving (i) and (iii)
Y = 100, X = 89
Total number of articles in all the shops = 3 × (80 + 75 + 60 + 90) = 915
Total number of article Z in all the shops = 72+ 45 + 99 + 81 = 297
Total number of article X and Y in all the shops = 915 – 297 = 618
Required difference = 618 – 297 = 321

Q24 Text Solution:

Shop A,

Total number of articles = 80 × 3 = 240
Number of article Z = 30% of 240 = 72
Total number of article = X + Y = 240 – 72 = 168 .....(i)
If X – Y = 8 .....(ii)
X = 88, Y = 80
If Y – X = 8.....(iii)
Solving (i) and (iii)
Y = 88, X = 80

Shop B,

Total number of articles = 75 ×3 = 225
Number of article Z = 20% of 225 = 45
Total number of article = X + Y = 225 – 45 = 180.....(i)
If X – Y = 40.....(ii)
Solving (i) and (ii)
X = 110, Y = 70
If Y – X = 40.....(iii)
Solving (i) and (iii)
Y = 110, X= 70

Shop C,

Total number of articles = 60 × 3 = 180
Number of article Z = 55% of 180 = 99
Total number of articles = X + Y = 180 – 99 = 81..... (i)
If X – Y = 9.....(ii)
Solving (i) and (ii)
X = 45, Y = 36
If Y – X = 9.....(iii)
Solving (i) and (iii)
Y = 45, X = 36

Shop D,

Total number of articles = 90 × 3 = 270
Number of article Z = 30% of 270 = 81
Total number of articles = X + Y = 270 – 81 = 189.....(i)
If X – Y = 11.....(ii)

Solving (i) and (ii)

X = 100, Y = 89

If Y – X = 11.....(iii)

Solving (i) and (iii)

Y = 100, X = 89

Total number of articles in shop M = $\frac{180+270}{2}$ = 225

Articles X in shop M = $\frac{80+70}{2}$ = 75

Articles Y and Z = 225 – 75 = 150

Required ratio = 150 : 75 = 2:1

Q25 Text Solution:

Month	Total earning (in ₹)	Total profit (in ₹)
In Jan	12000	4000
In Feb	21000 - 12000 = 9000	6000 - 4000 = 2000
In Mar	36000 - 21000 = 15000	10500 - 6000 = 4500
In Apr	50000 - 36000 = 14000	15500 - 10500 = 5000
In May	60000 - 50000 = 10000	18000 - 15500 = 2500

Total investment in April = 14000 - 5000 = ₹9000

Total investment in May = 10000 - 2500 = ₹7500

Required ratio = 9000: 7500 = 6: 5

Q26 Text Solution:

Month	Total earning (in ₹)	Total profit (in ₹)
In Jan	12000	4000
In Feb	21000 - 12000 = 9000	6000 - 4000 = 2000
In Mar	36000 - 21000 = 15000	10500 - 6000 = 4500
In Apr	50000 - 36000 = 14000	15500 - 10500 = 5000
In May	60000 - 50000 = 10000	18000 - 15500 = 2500

Total earning In March and May together = 15000 + 10000 = ₹25000

Total profit In March and May together = 4500 + 2500 = ₹7000

Required percentage = $\frac{7000}{25000} \times 100$ = 28%

Q27 Text Solution:

Month	Total earning (in ₹)	Total profit (in ₹)
In Jan	12000	4000
In Feb	21000 - 12000 = 9000	6000 - 4000 = 2000
In Mar	36000 - 21000 = 15000	10500 - 6000 = 4500
In Apr	50000 - 36000 = 14000	15500 - 10500 = 5000
In May	60000 - 50000 = 10000	18000 - 15500 = 2500

Total earning in March = ₹15000

Total earning in April = ₹14000

Total earning in May = ₹10000

Required average = $\frac{15000+14000+10000}{3}$ = ₹13000

Q28 Text Solution:

Month	Total earning (in ₹)	Total profit (in ₹)
In Jan	12000	4000
In Feb	21000 - 12000 = 9000	6000 - 4000 = 2000
In Mar	36000 - 21000 = 15000	10500 - 6000 = 4500
In Apr	50000 - 36000 = 14000	15500 - 10500 = 5000
In May	60000 - 50000 = 10000	18000 - 15500 = 2500

Total earning in May = ₹10000

So, total earning in June = 85% of 10000 = ₹8500

Total profit in May = ₹2500

So, total earning in June = 140% of 2500 = ₹3500

Total investment in June = 8500 - 3500 = ₹5000

Total investment in February = 9000 - 2000 = ₹7000

Required difference = 7000 - 5000 = ₹2000

Q29 Text Solution:

Month	Total earning (in ₹)	Total profit (in ₹)
In Jan	12000	4000
In Feb	21000 - 12000 = 9000	6000 - 4000 = 2000
In Mar	36000 - 21000 = 15000	10500 - 6000 = 4500
In Apr	50000 - 36000 = 14000	15500 - 10500 = 5000
In May	60000 - 50000 = 10000	18000 - 15500 = 2500

Total investment in January = 12000 - 4000 = ₹8000

Total investment in April = 14000 - 5000 = ₹9000

Required percentage = $\frac{9000-8000}{8000}$ = 12.5%

Q30 Text Solution:

Number of black buckets sold in June = 90

Number of pink buckets sold in June = 90 × $\frac{4}{3}$ = 120

Number of orange buckets sold in June = (90 + 120) × $\frac{40}{60}$ = 140

Number of black buckets sold in July = 120

Number of pink buckets sold in July = 120 × $\frac{2}{1}$ = 240

Number of orange buckets sold in July = (240 + 120) × $\frac{25}{75}$ = 120

Number of black buckets sold in August = 168

Number of pink buckets sold in August = 168 × $\frac{7}{6}$ = 196

Number of orange buckets sold in August = (168 + 196) × $\frac{35}{65}$ = 196

Number of black buckets sold in September = 350

Number of pink buckets sold in September = 350 × $\frac{2}{5}$ = 140

Number of orange buckets sold in September = (350 + 140) × $\frac{30}{70}$ = 210

Number of black buckets sold in October = 80

Number of pink buckets sold in October = 80 × $\frac{3}{2}$ = 120

Number of orange buckets sold in October = (80 + 120) × $\frac{20}{80}$ = 50

Required ratio = $\frac{120+120}{240+120}$ = 240:360 = 2:3

Hence, the correct answer is A.

Q31 Text Solution:

Number of black buckets sold in June = 90

Number of pink buckets sold in June = 90 × $\frac{4}{3}$ = 120

Number of orange buckets sold in June = (90 + 120) × $\frac{40}{60}$ = 140

Number of black buckets sold in July = 120

Number of pink buckets sold in July = 120 × $\frac{2}{1}$ = 240

Number of orange buckets sold in July = (240 + 120) × $\frac{25}{75}$ = 120

Number of black buckets sold in August = 168

Number of pink buckets sold in August = 168 × $\frac{7}{6}$ = 196

Number of orange buckets sold in August = (168 + 196) × $\frac{35}{65}$ = 196

Number of black buckets sold in September = 350

Number of pink buckets sold in September = 350 × $\frac{2}{5}$ = 140

Number of orange buckets sold in September = (350 + 140) × $\frac{30}{70}$ = 210

Number of black buckets sold in October = 80

Number of pink buckets sold in October = 80 × $\frac{3}{2}$ = 120

Number of orange buckets sold in October = (80 + 120) × $\frac{20}{80}$ = 50

Required difference = 210 - (80 + 120) = 10 more

Hence, the correct answer is C.

Q32 Text Solution:

Number of black buckets sold in June = 90

Number of pink buckets sold in June = 90 × $\frac{4}{3}$ = 120

Number of orange buckets sold in June = (90 + 120) × $\frac{40}{60}$ = 140

Number of black buckets sold in July = 120

Number of pink buckets sold in July = 120 × $\frac{2}{1}$ = 240

Number of orange buckets sold in July = (240 + 120) × $\frac{25}{75}$ = 120

Number of black buckets sold in August = 168

Number of pink buckets sold in August = 168 × $\frac{7}{6}$ = 196

Number of orange buckets sold in August = (168 + 196) × $\frac{35}{65}$ = 196

Number of black buckets sold in September = 350

Number of pink buckets sold in September = 350 × $\frac{2}{5}$ = 140

Number of orange buckets sold in September = (350 + 140) × $\frac{30}{70}$ = 210

Number of black buckets sold in October = 80

Number of pink buckets sold in October = 80 × $\frac{3}{2}$ = 120

Number of orange buckets sold in October = (80 + 120) × $\frac{20}{80}$ = 50

Selling price of pink bucket = x

50 × 80 + 80 × 75 + 120 × x = 19600

120x = 9600

x = 80

So, selling price of pink bucket = Rs. 80

Q33 Text Solution:

Number of black buckets sold in June = 90

Number of pink buckets sold in June = 90 × $\frac{4}{3}$ = 120

Number of orange buckets sold in June = (90 + 120) × $\frac{40}{60}$ = 140

Number of black buckets sold in July = 120

Number of pink buckets sold in July = 120 × $\frac{2}{1}$ = 240

Number of orange buckets sold in July = (240 + 120) × $\frac{25}{75}$ = 120

Number of black buckets sold in August = 168

Number of pink buckets sold in August = 168 × $\frac{7}{6}$ = 196

Number of orange buckets sold in August = (168 + 196) × $\frac{35}{65}$ = 196

Number of black buckets sold in September = 350

Number of pink buckets sold in September = 350 × $\frac{2}{5}$ = 140

Number of orange buckets sold in September = (350 + 140) × $\frac{30}{70}$ = 210

Number of black buckets sold in October = 80

Number of pink buckets sold in October = 80 × $\frac{3}{2}$ = 120

Number of orange buckets sold in October = (80 + 120) × $\frac{20}{80}$ = 50

Number of black and pink buckets sold in September = 350 + 140 = 490

Required % = $\frac{(490-350)}{350} \times 100$ = 40%

Hence, correct answer is B.

Q34 Text Solution:

Number of black buckets sold in June = 90

Number of pink buckets sold in June = 90 × $\frac{4}{3}$ = 120

Number of orange buckets sold in June = (90 + 120) × $\frac{40}{60}$ = 140

Number of black buckets sold in July = 120

Number of pink buckets sold in July = 120 × $\frac{2}{1}$ = 240

Number of orange buckets sold in July = (240 + 120) × $\frac{25}{75}$ = 120

Number of black buckets sold in August = 168

Number of pink buckets sold in August = 168 × $\frac{7}{6}$ = 196

Number of orange buckets sold in August = (168 + 196) × $\frac{35}{65}$ = 196

Number of black buckets sold in September = 350

Number of pink buckets sold in September = 350 × $\frac{2}{5}$ = 140

Number of orange buckets sold in September = (350 + 140) × $\frac{30}{70}$ = 210

Number of black buckets sold in October = 80

Number of pink buckets sold in October = 80 × $\frac{3}{2}$ = 120

Number of orange buckets sold in October = (80 + 120) × $\frac{20}{80}$ = 50

Number of black and pink buckets sold in November = 360 × $\frac{125}{100}$ = 450

Number of orange buckets sold in November = 140 × $\frac{5}{7}$ = 100

Required total number of buckets in November
= 450 + 100 = 550
Hence, the correct answer is C.

Q35 Text Solution:
Total candidate who appeared in online exams in Haryana and Manipur together
= 460+500
=960
Total candidate who appeared in offline exams in Punjab and New Delhi together
= $\frac{440}{55} \times 45 + \frac{320}{64} \times 36$
= 360 + 180
= 540
Required Ratio = $\frac{960}{540} = \frac{16}{9}$
= 16: 9

Q36 Text Solution:
Candidate who didn't completed online and offline exams from Manipur are equal
Candidate who didn't completed online exams from Manipur = 45
Candidate who didn't completed offline exams from Manipur = 45 Candidate who completed online exams from Manipur =
500 -45= 455
Candidate who completed offline exams from Manipur =
750 -45= 705
Required % = $\frac{705 - 455}{455} \times 100 = 54.94\ \%$
= 55 % (approx.)

Q37 Text Solution:
Total candidate who appeared in online exams in all states
$= 440 + 320 + 460 + 500 + 525$
= 2245
Total candidate who appeared in offline exams in all states
= $(\frac{440}{55} \times 45)$ +
$(\frac{320}{64} \times 36) + (\frac{460}{46} \times 54) + (\frac{500}{40} \times 60)$ +
$(\frac{525}{70} \times 30)$
$= 360 + 180 + 540 + 750 + 225 = 2055$
Required difference =2245-2055
= 190

Q38 Text Solution:
Total candidate who appeared in offline exams in Punjab and New Delhi together
$= \frac{440}{55} \times 45 + \frac{320}{64} \times 36$
= 360 + 180
= 540
Total candidate who appeared in online exams in New Delhi
= 320
Required Percentage = $\frac{540}{320} \times 100$
= 168.75 %

Q39 Text Solution:
Total candidates from Punjab = $\frac{440}{55}$ × 100= 800
Total candidates who completed exam from Punjab
= 800 -105 =695
Total candidates from Manipur = $\frac{500}{40}$ × 100= 1250
Total candidates who completed exam from Manipur
= 1250 - 90 =1160
Required difference= 1160 -695
= 465

Level-2

Q1 Text Solution:

Number of children travelling to Nainital = 480 × $\frac{1}{3}$ = 160

Number of females travelling to Nainital = 840 – 480 = 360

Total number of people travelling to Nainital = 480 + 160 + 360 = 1000

Similarly,

'Cities'	Number of males travelling	Number of females travelling	Number of children travelling	Total number of people travelling
Nainital	480	360	160	1000
Mussoorie	540	540	120	1200
Shimla	420	240	140	800

Required percentage = $\frac{540-240}{240}$ × 100 = $\frac{300}{240}$ × 100 = 125%

Hence, the correct option is C.

Q2 Text Solution:

Number of children travelling to Nainital = 480 × $\frac{1}{3}$ = 160

Number of females travelling to Nainital = 840 – 480 = 360

Total number of people travelling to Nainital = 480 + 160 + 360 = 1000

Similarly,

'Cities'	Number of males travelling	Number of females travelling	Number of children travelling	Total number of people travelling
Nainital	480	360	160	1000
Mussoorie	540	540	120	1200
Shimla	420	240	140	800

Required percentage = $\frac{240-120}{240}$ × 100 = 50%

Hence, the correct option is D.

Q3 Text Solution:

Number of children travelling to Nainital = 480 × $\frac{1}{3}$ = 160

Number of females travelling to Nainital = 840 – 480 = 360

Total number of people travelling to Nainital = 480 + 160 + 360 = 1000

Similarly,

'Cities'	Number of males travelling	Number of females travelling	Number of children travelling	Total number of people travelling
Nainital	480	360	160	1000
Mussoorie	540	540	120	1200
Shimla	420	240	140	800

Required ratio = 1200:800 = 3:2

Hence, the correct option is D.

Q4 Text Solution:

Number of children travelling to Nainital = 480 × $\frac{1}{3}$ = 160

Number of females travelling to Nainital = 840 – 480 = 360

Total number of people travelling to Nainital = 480 + 160 + 360 = 1000

Similarly,

'Cities'	Number of males travelling	Number of females travelling	Number of children travelling	Total number of people travelling
Nainital	480	360	160	1000
Mussoorie	540	540	120	1200
Shimla	420	240	140	800

Total number of males travelling to Nainital and Shimla = 480 + 420 = 900

Total number of females travelling to Mussoorie and Shimla = 540 + 240 = 780

Required difference = 900 – 780 = 120

Hence, the correct option is C.

Q5 Text Solution:

Number of children travelling to Nainital = 480 × $\frac{1}{3}$ = 160

Number of females travelling to Nainital = 840 – 480 = 360

Total number of people travelling to Nainital = 480 + 160 + 360 = 1000

Similarly,

'Cities'	Number of males travelling	Number of females travelling	Number of children travelling	Total number of people travelling
Nainital	480	360	160	1000
Mussoorie	540	540	120	1200
Shimla	420	240	140	800

Total number of people travelling to Ooty = 1000 + 500 = 1500

Number of females travelling to Ooty = $\frac{4}{10}$ × 1500 = 600

Hence, option C.

Q6. Text Solution:

The number of Adults in the village A = 60% of 1400 =840

The number of females in the village A = (100-40) % of 840 = 504

The number of children in the village A = 40% of 1400 =560

The number of girls in village A = $\frac{3}{5} \times 560 = 336$

The total number of females and girls in the village A = 504 + 336 = 840

Q7. Text Solution:

In village B the number of females $= \frac{2}{3} of\ 40\%\ of\ 1500 = 400$

The number of children in village B = 60% of 1500 = 900

The number of girls in village B = $\frac{2}{5} \times 900 = 360$

The total number of females and number of girls educated in village B = 20% of 400 + 90% of 360 = 80 + 324 =404

Required % = $\frac{404}{1500} \times 100 \approx 27\%$

Q8. Text Solution:

The number of males in village C = $\frac{4}{9} \times 75\%\ of\ 1800 = 600$

The number of girls in village C = $\frac{3}{10} \times 25\%\ of\ 1800 = 135$

Required % = $\frac{135}{600} \times 100 = 22.5\%$

Q9. Text Solution:

Required difference = $\frac{7}{12} of\ 72\%\ of\ 1200 - \frac{1}{3}\ of\ 48\%\ of\ 2100$

=504 - 336 = 168

Q10. Text Solution:

Required difference $= \frac{3}{5} \times 60\%\ of\ 1500 - \frac{4}{7} \times 28\%\ of\ 1200$

= 540-192 = 348

Q11 Text Solution:

Time taken by Edrish to complete the whole work

= $\frac{14}{25} \times 100 = 56$ days

Time taken by David to complete the whole work = $\frac{6}{10} \times 100 = 60$ days

Time taken by Aman to complete the whole work = $\frac{6}{15} \times 100 = 40$ days

Time taken by Chaman to complete the whole work

= $\frac{10}{20} \times 100 = 50$ days

Time taken by Baman to complete the whole work
= $\frac{12}{30} \times 100 = 40$ days
Let, total work be LCM (60, 50, 40) = 600 units
One day work of David = $\frac{600}{60} = 10\ units$
One day work of Chaman = $\frac{600}{50} = 12$ units
One day work of Baman = $\frac{600}{40} = 15\ units$
Work done by Baman = $15 \times 16 = 240$ units
Work done by Chaman = 12×100
$= 120$ units
Remaining work
= $600 - 240 - 120 = 240\ units$
Time taken by David to complete the work
= $\frac{240}{10} = 24\ days$
So, the total time taken to complete the work
= 24 days

Q12 Text Solution:

Time taken by Edrish to complete the whole work = $\frac{14}{25} \times 100 = 56$ days
Time taken by David to complete the whole work = $\frac{6}{10} \times 100 = 60$ days
Time taken by Aman to complete the whole work = $\frac{6}{15} \times 100 = 40$ days
Time taken by Chaman to complete the whole work = $\frac{10}{20} \times 100 = 50$ days
Time taken by Baman to complete the whole work = $\frac{12}{30} \times 100 = 40$ days
Let, total work = 560 units
80% of the work = 0.8 x 560 = 448 units
And remaining time = $56 - 16 = 40$ days
So, per day work = $\frac{448}{40} = 11.2$ units
Original per day work = $\frac{560}{56} = 10$ units
So, the desired percentage = $\frac{11.2-10}{10} \times 100 = 12\%$

Q13 Text Solution:

Time taken by Edrish to complete the whole work = $\frac{14}{25} \times 100 = 56$ days
Time taken by David to complete the whole work = $\frac{6}{10} \times 100 = 60$ days
Time taken by Aman to complete the whole work = $\frac{6}{15} \times 100 = 40$ days
Time taken by Chaman to complete the whole work
= $\frac{10}{20} \times 100 = 50$ days
Time taken by Baman to complete the whole work
= $\frac{12}{30} \times 100 = 40$ days
Time taken by David and Edrish to complete the work if working together
= $\frac{56\times60}{56+60} = 29\ days$
Time taken by Chaman and Baman to complete the work if working together
= $\frac{50\times40}{50+40} = \frac{200}{9}$ days
Time taken by Baman and Aman to complete the work if working together
= $\frac{40\times40}{40+40} = 20$ days
Time taken by Aman and Edrish to complete the work if working together
= $\frac{56\times40}{56+40} = \frac{70}{3}$ days

Q14 Text Solution:

Time taken by Edrish to complete the whole work
= $\frac{14}{25} \times 100 = 56$ days
Time taken by David to complete the whole work = $\frac{6}{10} \times 100 = 60$ days
Time taken by Aman to complete the whole work = $\frac{6}{15} \times 100 = 40$ days
Time taken by Chaman to complete the whole work
= $\frac{10}{20} \times 100 = 50$ days
Time taken by Baman to complete the whole work
= $\frac{12}{30} \times 100 = 40$ days
Let, total work be LCM (56, 60) = 840 units
One day work of Edrish = $\frac{840}{56} = 15$ units

One day work of David = $\frac{840}{60} = 14$ units

Total work done by Edrish and David in 40 days, working on alternate days

= $20 \times (15 + 14) = 580$ units

Amount of work done by Edrish in 4 days

= $15 \times 4 = 60$ units

Total work done = $580 + 60 = 640$ units

Remaining work = $840 - 640 = 200$ units

Time taken by Pankaj to complete the work

= $54 - (40 + 4) = 10\ days$

So, one day work of Pankaj = $\frac{200}{10} = 20\ units$

Therefore, time taken by Pankaj to complete the whole work = $\frac{840}{20} = 42$ days

Q15 Text Solution:

Time taken by Edrish to complete the whole work = $\frac{14}{25} \times 100 = 56$ days

Time taken by David to complete the whole work = $\frac{6}{10} \times 100 = 60$ days

Time taken by Aman to complete the whole work = $\frac{6}{15} \times 100 = 40$ days

Time taken by Chaman to complete the whole work = $\frac{10}{20} \times 100 = 50$ days

Time taken by Baman to complete the whole work

= $\frac{12}{30} \times 100 = 40$ days

Time taken by Chetan to complete the work

= 60 – 12 = 48 days

Time taken by Ketan to complete the work

= $\frac{56}{0.7} = 80\ days$

One day work done by Chetan and Ketan working together = $\frac{1}{80} + \frac{1}{48} = \frac{1}{30}$

Let, total work be LCM (48, 80, 30)

= 720 units

Units of work done by Chetan and Ketan in one day

= $\frac{720}{30} = 24$ units

Units of work done by Chetan and Ketan in 10 day

= $24 \times 10 =$ units

Remaining units of work done

= $720 - 240 = 480$ units

Units of work done completed by David in one day

= $\frac{720}{\frac{60}{1.25}} = 15$ units

Time taken by David to complete the remaining work with 25% more efficiency = $\frac{480}{15} = 32$ days

Q16 Text Solution:

Since, CP of article A = ₹2000

So, SP of article A = 112.5% of 2000 = ₹2250

And SP of article B = $2250 \times \frac{4}{9}$ = ₹1000

Since, article B is sold at $16\frac{2}{3}\%$ discount on its MP.

So, MP of article B = $1000 \times \frac{300}{250}$ = ₹1200

Since, CP of article B = ₹800

So, marked up amount of article B = 1200 - 800 = ₹400

And discount given on article B = 1200 - 1000 = ₹200

Required ratio = 400: 200 = 2: 1

Q17 Text Solution:

Since, CP of article A = ₹2000

So, SP of article A = 112.5% of 2000 = ₹2250

MP of article A = $2250 \times \frac{100}{90}$ = ₹2500

Marked up percent of article A = $\frac{2500-2000}{2000} \times 100 = 25\%$

Marked up percent of article E = 20%

Required ratio = 25: 20 = 5: 4

Q18 Text Solution:

Since, CP of articles D and E are ₹1500 and ₹2400 respectively.

So, CP of article C = 3 × 1900 - 1500 - 2400 = ₹1800

And SP of article C = $1800 \times \frac{116}{100} \times \frac{95}{100}$ = ₹1983.6

Profit received on article C = 1983.6 - 1800 = ₹183.6

Profit received on article D = 183.6 - 165.6 = ₹18

Since, CP of article D = ₹1500

SP of article D = 1500 + 18 =₹1518

So, MP of article D = $1518 \times \frac{100}{92}$ = ₹1650

And marked up percent of article D = $\frac{1650-1500}{1500} \times 100$=10%

Q19 Text Solution:

CP of article E = ₹2400

MP of article E = 120% of 2400 = ₹2880

MP of article C = 2880 + 20 = ₹2900

CP of article C = $2900 \times \frac{100}{116}$ = ₹2500

SP of article C = (100 - 5)% of 2900 = ₹2755

Profit received on article C = 2755 - 2500 = ₹255

Q20 Text Solution:

Since, CP of article E = ₹2400

So, marked up amount of article E = 20% of 2400 = ₹480

And marked up amount of article A = $480 \times \frac{100}{120}$ = ₹400

Since, CP of article A = ₹2000

So, MP of article A = 2000 + 400 = ₹2400

SP of article A = 90% of 2400 = ₹2160

Profit received on article A = 2160 - 2000 = ₹160

Profit received on article E = 30% of 160 = ₹48

And SP of article E = 2400 + 48 = ₹2448

Since, MP of article E = 2400 + 480 = ₹2880

So, discount percent given on article E = $\frac{2880-2448}{2880} \times 100 = 15\%$

Q21 Text Solution:

Common Solution:

Day	Total order received	No. of order received with next day delivery
On Mon	180	$33\frac{1}{3}\%$ of 180 = 60
Till Tue	450	48% of 450 = 216
Till Wed	600	45% of 600 = 270
Till Thu	840	50% of 840 = 420
Till Fri	1000	48% of 1000 = 480

Day	Total orders received	No. of orders received with next day delivery	No. of orders received with same day delivery
Mon	180	60	180 - 60 = 120
Tue	450 - 180 = 270	216 - 60 = 156	270 - 156 = 114
Wed	600 - 450 = 150	270 - 216 = 54	150 - 54 = 96
Thu	840 - 600 = 240	420 - 270 = 150	240 - 150 = 90
Fri	1000 - 840 = 160	480 - 420 = 60	160 - 60 = 100

Total no. of orders delivered on Tue = No. of orders received on Mon with next day delivery + No. of orders received on Tue with same day delivered

So, total no. of orders delivered on Tue = 60 + 114 = 174

Total no. of orders delivered on Fri = No. of orders received on Thu with next day delivery +

No. of orders received on Fri with same day delivery

So, total no. of orders delivered on Fri = 150 + 100 = 250

Required percentage = = 69.6%

Q22 Text Solution:

Common Solution:

Day	Total order received	No. of order received with next day delivery
On Mon	180	$33\frac{1}{3}\%$ of 180 = 60
Till Tue	450	48% of 450 = 216
Till Wed	600	45% of 600 = 270
Till Thu	840	50% of 840 = 420
Till Fri	1000	48% of 1000 = 480

Day	Total orders received	No. of orders received with next day delivery	No. of orders received with same day delivery
Mon	180	60	180 - 60 = 120
Tue	450 - 180 = 270	216 - 60 = 156	270 - 156 = 114
Wed	600 - 450 = 150	270 - 216 = 54	150 - 54 = 96
Thu	840 - 600 = 240	420 - 270 = 150	240 - 150 = 90
Fri	1000 - 840 = 160	480 - 420 = 60	160 - 60 = 100

Number of orders received on Mon with next day delivery = 60

Number of orders received on Tue with next day delivery = 156

Number of orders received on Wed with next day delivery = 54

Number of orders received on Thu with next day delivery = 150

Number of orders received on Fri with next day delivery = 60

Required average = = 96

Q23 Text Solution:

Common Solution:

Day	Total order received	No. of order received with next day delivery
On Mon	180	$33\frac{1}{3}\%$ of 180 = 60
Till Tue	450	48% of 450 = 216
Till Wed	600	45% of 600 = 270
Till Thu	840	50% of 840 = 420
Till Fri	1000	48% of 1000 = 480

Day	Total orders received	No. of orders received with next day delivery	No. of orders received with same day delivery
Mon	180	60	180 - 60 = 120
Tue	450 - 180 = 270	216 - 60 = 156	270 - 156 = 114
Wed	600 - 450 = 150	270 - 216 = 54	150 - 54 = 96
Thu	840 - 600 = 240	420 - 270 = 150	240 - 150 = 90
Fri	1000 - 840 = 160	480 - 420 = 60	160 - 60 = 100

Total number of orders with same day delivery received on Tue, Wed and Thu together = 114 + 96 + 90 = 300

Total number of orders with next day delivery received on Tue, Wed and Thu together = 156 + 54 + 150 = 360

Required difference = 360 - 300 = 60

Q24 Text Solution:

Common Solution:

Day	Total order received	No. of order received with next day delivery
On Mon	180	180 of 180 = 60
Till Tue	450	48% of 450 = 216
Till Wed	600	45% of 600 = 270
Till Thu	840	50% of 840 = 420
Till Fri	1000	48% of 1000 = 480

Day	Total orders received	No. of orders received with next day delivery	No. of orders received with same day delivery
Mon	180	60	180 - 60 = 120
Tue	450 - 180 = 270	216 - 60 = 156	270 - 156 = 114
Wed	600 - 450 = 150	270 - 216 = 54	150 - 54 = 96
Thu	840 - 600 = 240	420 - 270 = 150	240 - 150 = 90
Fri	1000 - 840 = 160	480 - 420 = 60	160 - 60 = 100

Total no. of orders delivered on Sun = No. of orders received on Sun with next day delivery + No. of orders received on Mon with same day delivery

So, total no. of orders delivered on Mon = 24 + 120 = 144

Total no. of orders delivered on Thu = No. of orders received on Wed with next day delivery +

No. of orders received on Thu with same day delivery

So, total no. of orders delivered on Thu = 54 + 90 = 144

Required ratio = 144: 144 = 1: 1

Q25 Text Solution:

Common Solution:

Day	Total order received	No. of order received with next day delivery
On Mon	180	$33\frac{1}{3}\%$ of 180 = 60
Till Tue	450	48% of 450 = 216
Till Wed	600	45% of 600 = 270
Till Thu	840	50% of 840 = 420
Till Fri	1000	48% of 1000 = 480

Day	Total orders received	No. of orders received with next day delivery	No. of orders received with same day delivery
Mon	180	60	180 - 60 = 120
Tue	450 - 180 = 270	216 - 60 = 156	270 - 156 = 114
Wed	600 - 450 = 150	270 - 216 = 54	150 - 54 = 96
Thu	840 - 600 = 240	420 - 270 = 150	240 - 150 = 90
Fri	1000 - 840 = 160	480 - 420 = 60	160 - 60 = 100

Since, number of orders with same day delivery received on Wed = 96

So, number of orders with same day delivery received on Sat = 75% of 96 = 72

Since, number of orders with next day delivery received on Tue = 156

So, number of orders with next day delivery received on Sat = 50% of 156 = 78

Total number of orders received on Sat = 72 + 78 = 150

Total number of orders received on Fri = 100 + 60 = 160

Required percentage = = 93.75%

Q26 Text Solution:

Common Solution:

Let number of students in classes A and C are '5x' and '3x' respectively.

Also let the age of the teacher is 'y' years.

Since, sum of ages of the students in class A = 240 years

And average age of class A with the teacher = 17.5 years

So,

$\frac{240+y}{5x+1} = 17.5$

y = 17.5 × (5x + 1) - 240 ––––––––(1)

Since, sum of ages of the students in class C = 108 years

And average age of class C with the teacher = 14.8 years

So,

$\frac{108+y}{3x+1} = 14.8$

y = 14.8 × (3x + 1) - 108 ––––––––(2)

From equations (1) and (2):

87.5x + 17.5 - 240 = 44.4x + 14.8 - 108

43.1x = 129.3

x = 3

From equation (1):

y = 17.5 × (15 + 1) - 240

y = 40

Age of the teacher = 40 years

Class A:

Number of students in class A = 5 × 3 = 15

Class B:

Let number of students in class B = 'b'

So,

$\frac{266+40}{b+1} = 15.3$

b = 19

Number of students in class B = 19

Class C:

Number of students in class C = 3 × 3 = 9

Class D:

Let number of students in class D = 'd'

So,

$\frac{210+40}{d+1} = 16\frac{2}{3}$

d = 14

Number of students in class D = 14

Class E:

Let number of students in class E = e

So,

$\frac{380+40}{e+1} = 20$

e = 20

Number of students in class E = 20

Number of students in class A = 15

Sum of ages of the students in class A = 240 years

So, average age of class A, without the teacher = $\frac{240}{15}$ = 16 years

Number of students in class D = 14

Sum of ages of the students in class D = 210 years

So, average age of class D, without the teacher = $\frac{210}{14}$ = 15 years

Required percentage = $\frac{15}{16} \times 100$ = 93.75%

Q27 Text Solution:

Common Solution:

Let number of students in classes A and C are '5x' and '3x' respectively.

Also let the age of the teacher is 'y' years.

Since, sum of ages of the students in class A = 240 years

And average age of class A with the teacher = 17.5 years

So,

$\frac{240+y}{5x+1} = 17.5$

y = 17.5 × (5x + 1) - 240 ––––––––(1)

Since, sum of ages of the students in class C = 108 years

And average age of class C with the teacher = 14.8 years

So,

$\frac{108+y}{3x+1} = 14.8$

y = 14.8 × (3x + 1) - 108 ––––––––(2)

From equations (1) and (2):

87.5x + 17.5 - 240 = 44.4x + 14.8 - 108

43.1x = 129.3

x = 3

From equation (1):

y = 17.5 × (15 + 1) - 240

y = 40

Age of the teacher = 40 years

Class A:

Number of students in class A = 5 × 3 = 15

Class B:

Let number of students in class B = 'b'

So,

b = 19

Number of students in class B = 19

Class C:

Number of students in class C = 3 × 3 = 9

Class D:

Let number of students in class D = 'd'

So,

$\frac{210+40}{d+1} = 16\frac{2}{3}$

d = 14

Number of students in class D = 14

Class E:

Let number of students in class E = e

So,

$\frac{380+40}{e+1} = 20$

e = 20

Number of students in class E = 20

Total number of students in class A = 15

Total number of students in class E = 20

Required ratio = 15: 20 = 3: 4

Q28 Text Solution:

Common Solution:

Let number of students in classes A and C are '5x' and '3x' respectively.

Also let the age of the teacher is 'y' years.

Since, sum of ages of the students in class A = 240 years

And average age of class A with the teacher = 17.5 years

So,

$\frac{240+y}{5x+1} = 17.5$

y = 17.5 × (5x + 1) - 240 ––––––––(1)

Since, sum of ages of the students in class C = 108 years

And average age of class C with the teacher = 14.8 years

So,

$\frac{108+y}{3x+1} = 14.8$

y = 14.8 × (3x + 1) - 108 ––––––––(2)

From equations (1) and (2):

87.5x + 17.5 - 240 = 44.4x + 14.8 - 108

43.1x = 129.3

x = 3

From equation (1):

y = 17.5 × (15 + 1) - 240

y = 40

Age of the teacher = 40 years

Class A:

Number of students in class A = 5 × 3 = 15

Class B:

Let number of students in class B = 'b'

So,

$\frac{266+40}{b+1} = 15.3$

b = 19

Number of students in class B = 19

Class C:

Number of students in class C = 3 × 3 = 9

Class D:

Let number of students in class D = 'd'

So,

$\frac{210+40}{d+1} = 16\frac{2}{3}$

d = 14

Number of students in class D = 14

Class E:

Let number of students in class E = e

So,

e = 20

Number of students in class E = 20

Number of students in class A = 15

Sum of ages of the students in class A = 240 years

Number of students in class D = 14

Sum of ages of the students in class D = 210 years

When all the students of class A are merged with all the students of class D, then average age of the students of classes A and D:

$\frac{240+210}{15+14}$ = 15.5 years (approximately)

Q29 Text Solution:

Common Solution:

Let number of students in classes A and C are '5x' and '3x' respectively.

Also let the age of the teacher is 'y' years.

Since, sum of ages of the students in class A = 240 years

And average age of class A with the teacher = 17.5 years

So,

$\frac{240+y}{5x+1} = 17.5$

y = 17.5 × (5x + 1) - 240 ––––––––(1)

Since, sum of ages of the students in class C = 108 years

And average age of class C with the teacher = 14.8 years

So,

$\frac{108+y}{3x+1} = 14.8$

y = 14.8 × (3x + 1) - 108 ––––––––(2)

From equations (1) and (2):

87.5x + 17.5 - 240 = 44.4x + 14.8 - 108

43.1x = 129.3

x = 3

From equation (1):

y = 17.5 × (15 + 1) - 240

y = 40

Age of the teacher = 40 years

Class A:

Number of students in class A = 5 × 3 = 15

Class B:

Let number of students in class B = 'b'

So,

$\frac{266+40}{b+1} = 15.3$

b = 19

Number of students in class B = 19

Class C:

Number of students in class C = 3 × 3 = 9

Class D:

Let number of students in class D = 'd'

So,

$\frac{210+40}{d+1} = 16\frac{2}{3}$

d = 14

Number of students in class D = 14

Class E:

Let number of students in class E = e

So,

$\frac{380+40}{e+1} = 20$

e = 20

Number of students in class E = 20

Since, sum of ages of the students in class B = 266 years

So, sum of ages of the students in class F = 266 + 34 = 300 years

Since, number of students in class A = 15

So, number of students in class F = $15 \times \frac{4}{5}$ = 12

And average age of class F without the teacher = $\frac{300}{12}$ = 25 years

Q30 Text Solution:

Common Solution:

Let number of students in classes A and C are '5x' and '3x' respectively.

Also let the age of the teacher is 'y' years.

Since, sum of ages of the students in class A = 240 years

And average age of class A with the teacher = 17.5 years

So,

$\frac{240+y}{5x+1} = 17.5$

y = 17.5 × (5x + 1) - 240 ––––––––(1)

Since, sum of ages of the students in class C = 108 years

And average age of class C with the teacher = 14.8 years

So,

$\frac{108+y}{3x+1} = 14.8$

y = 14.8 × (3x + 1) - 108 ––––––––(2)

From equations (1) and (2):

87.5x + 17.5 - 240 = 44.4x + 14.8 - 108

43.1x = 129.3

x = 3

From equation (1):

y = 17.5 × (15 + 1) - 240

y = 40

Age of the teacher = 40 years

Class A:

Number of students in class A = 5 × 3 = 15

Class B:

Let number of students in class B = 'b'

So,

$\frac{266+40}{b+1} = 15.3$

b = 19

Number of students in class B = 19

Class C:

Number of students in class C = 3 × 3 = 9

Class D:

Let number of students in class D = 'd'

So,

$\frac{210+40}{d+1} = 16\frac{2}{3}$

d = 14

Number of students in class D = 14

Class E:

Let number of students in class E = e

So,

$\frac{380+40}{e+1} = 20$

e = 20

Number of students in class E = 20

Number of students in class C = 9

Sum of ages of the students in class C = 108 years

So, average age of class C without teacher = $\frac{108}{9}$ = 12 years

Number of students in class E = 20

Sum of ages of the students in class E = 380 years

So, average age of class E without teacher = $\frac{380}{20}$ = 19 years

Required difference = 19 - 12 = 7 years

Level-3

Q1 Text Solution:

Let the number of seats in buses A and C be 28x and 19x respectively.

Number of males who booked tickets in bus A = $\frac{4}{7}$ × 0.65 × 28x = 10.4x

Number of males who booked tickets in bus C = $\frac{11}{19}$ × 0.85 × 19x = 9.35x

So, 10.4x – 9.35x = 42

1.05x = 42

x = 40

Number of females who booked tickets in bus A = $\frac{3}{7}$ × 0.65 × 28 × 40 = 312

Number of females who booked tickets in bus C = $\frac{8}{19}$ × 0.85 × 19 × 40 = 272

Desired difference = 312 – 272 = 40

Hence, the correct option is B.

Q2 Text Solution:

Ratio of number of males to females who booked tickets in bus E = 6:5

Number of males who booked ticket in bus E = $\frac{6}{11}$ × 0.88 × 1050 = 504

Number of males who booked tickets in bus C = $\frac{11}{19}$ × 0.85 × 2660 = 1309

Desired Answer = 1309 + 504 = 1813

Hence, the correct option is B.

Q3 Text Solution:

Let the number of seats available in bus A and C be 21x and 19x respectively.

Number of males who booked tickets in bus A = $\frac{4}{7}$ × 0.65 × 21x = 7.8x

Number of females who booked tickets in bus C = $\frac{8}{19}$ × 0.85 × 19x = 6.8x

So, 7.8x + 6.8x = 2044

14.6x = 2044

x = 140

Desired average = 40 × $\frac{140}{2}$ = 2800

Hence, the correct option is A.

Q4 Text Solution:

Number of males who booked tickets in bus D = $\frac{5}{7}$ × 0.84 × 1750 = 1050

Total number of seats available in bus B = 1.2 × 1050 = 1260

Number of females who booked tickets in bus B = $\frac{5}{9}$ × 0.80 × 1260 = 560

Number of females who booked tickets in bus D = $\frac{2}{7}$ × 0.84 × 1750 = 420

Desired Percentage = [(560 – 420)÷560] × 100 = 25%

Hence, the correct option is C.

Q5 Text Solution:

Number of males in bus E = $\frac{4}{7}$ × 0.88 × 1050 = 528

Total number of seats available in bus B = 4.5 × 528 = 2376

Number of females who booked seats in bus B = $\frac{5}{9}$ × 0.75 × 2376 = 990

Hence, the correct option is C.

Q6 Text Solution:

The principal amount invested by Srinivas = $30000 \times \frac{5}{3} = Rs.\ 50000$

Total amount received by Srinivas = Rs.56180

Time period (n) = 2 years

Amount = P $(1+\frac{r}{100})^n$

$56180 = 50000\ (\frac{100+r}{100})^2$

$\frac{56180}{50000} = (\frac{100+r}{100})^2$

$\frac{2809}{2500} = (\frac{100+r}{100})^2$

$\frac{53}{50} = \frac{100+r}{100}$

106 = 100 + r

Rate of interest (r) = 6 %

Q7 Text Solution:

$P = Rs.\ 40000,\ r = 8\ \%,\ n = 2\ years$

Compound interest:

40000 × $\frac{8}{100}$ = 3200

43200× $\frac{8}{100}$ = 3456

C.I = 3200 + 3456 = Rs. 6656

Total amount received by Pankaj = 40000 + 6656 = Rs. 46656

Q8 Text Solution:

Rate of interest for Mahendra = $\frac{2}{1} \times 5$= 10 %

Time period (n) = $3\ years,\ C.I = Rs.\ 19860$

C.I = P $(1 + \frac{r}{100})^n - 1$

19860 = P $(\frac{110}{100})^3 - 1$

19860 = P $(\frac{11}{10})^3 - 1$

19860 = P $(\frac{1331}{1000}) - 1$

19860 = P× $\frac{331}{1000}$

P = 19860 × $\frac{1000}{331}$ = Rs. 60000

Required average = $\frac{(40000 + 30000 + 60000 + 80000)}{4}$

= $\frac{210000}{4}$

= Rs. 52500

Q9 Text Solution:

The total principal amount invested by Simran = $\frac{1}{2} \times 40000 = Rs.\ 20000$Rate of interest (r) = 5 %

Total amount received by Simran = Rs. 22050

Amount = P $(1 + \frac{r}{100})^n$

22050 = 20000$(\frac{100+5}{100})^n$

$\frac{22050}{20000} = (\frac{21}{20})^n$

$\frac{441}{400} = (\frac{21}{20})^n$

$(\frac{21}{20})^2 = (\frac{21}{20})^n$

Number of years (n) = 2 years

Q10 Text Solution:

Selling price of article C = Rs.4840

Discount = 20%

MRP = 100 × $\frac{4840}{80}$= Rs.6050

Discount = $6050 - 4840 = Rs.1210$

Discount on article A = 1210 + 840 = Rs.2050

Selling price of article A = 9160 – 2050 = Rs.7110

Selling price of article D = 7800 × $\frac{(100 - 18)}{100}$ = 7800 × $\frac{82}{100}$= Rs.6396

Ratio of selling price of article A to article D = 7110 : 6396 = 1185 : 1066

Q11 Text Solution:

Let the cost price of an article be Rs.x.

MRP = 1.75x

Discount = 15%

Selling price = 1.75x × $\frac{85}{100}$= 1.4875x

Profit = $1.4875x - x = 0.4875x$

Profit percentage = $100 \times \frac{.4875x}{x} = 48.75\%$

Q12 Text Solution:

Profit on article E = 30%

30% = 1980

Selling price = $100 + 30 = 130\%$

Selling price of article E =130 × $\frac{2130}{30}$= Rs.9230

Discount = 25%

MRP of article E = 100 × $\frac{9230}{75}$= Rs.12306.67

MRP of article D = Rs.7800

$Required\ percentage = \frac{12306.67 - 7800}{7800} \times 100 = \frac{4506.67}{78}$=57.77%

Q13 Text Solution:

Selling price of article B = 4840

Discount = 20%

Selling price = $80\%\ of\ MRP$

MRP = 100 × $\frac{4840}{80}$= Rs.6050

Profit = 10%

Cost price = 100 × $\frac{4840}{110}$ = 4400

Difference between the MRP and cost price of article B = 6050 – 4400 = Rs.1650

Q14 Text Solution:

MRP of article E = $2650 + 5410 = Rs.8060$

Discount on article E = 25%

Selling price of article E = 8060 × $\frac{75}{100}$= Rs.6045

Profit = 30%

Cost price of article E = 100 × $\frac{6045}{130}$ = Rs.4650

Q15. Text Solution:

40P + 30P + 50P + 80P = 2700

200P = 2700

10P = 135

City	Male Adult	Female Adult	Children %
A	540		20
B	405	275	15
C	675	225	25
D	1080	320	30

In City B,

85% = 405 + 275 =680

So, 15% = 120 children

In City C,

75% = 675 + 225 = 900

So, 25% =300 children

In City D,

70% = 1080 + 320 = 1400

So, 30% = 600 children

Total population of city A = $4 \times 225 = 900$

The number of children in city A = 20% of 900 = 180

20% = 180

So, 80% = 720 Adults in city A.

Number of adult females in city A = 720 - 540 = 180

The number of female adult students in city A = $= \frac{7}{12} \times 180 = 105$

Required difference = 180 - 105 =75

Q16. Text Solution:

40P + 30P + 50P + 80P = 2700

200P = 2700

10P = 135

City	Male Adult	Female Adult	Children %
A	540		20
B	405	275	15
C	675	225	25
D	1080	320	30

In City B,

85% = 405 + 275 =680

So, 15% = 120 children

In City C,

75% = 675 + 225 = 900

So, 25% =300 children

In City D,

70% = 1080 + 320 = 1400

So, 30% = 600 children

In city E the number of male adults = 120% of 225 = 270

The number of children in City E = 120 + 300 = 420

14% of the total population of City E = 420

The total population of City E = $\frac{420}{14} \times 100 = 3000$

The number of Adults in City E = 86% of 3000 =2580

The number of female Adults in city E = 2580 - 270 =2310

Q17. Text Solution:

40P + 30P + 50P + 80P = 2700

200P = 2700

10P = 135

City	Male Adult	Female Adult	Children %
A	540		20
B	405	275	15
C	675	225	25
D	1080	320	30

In City B,

85% = 405 + 275 =680

So, 15% = 120 children

In City C,

75% = 675 + 225 = 900

So, 25% =300 children

In City D,

70% = 1080 + 320 = 1400

So, 30% = 600 children

The number of illiterate adults in City D = $\frac{2}{3} \times 1080 + 75\% \ of \ 320 = 720 + 240 = 960$

The number of children above 5 years = 70% of 600 = 420

Required % = $\frac{960-420}{420} \times 100 = 128.57\%$

Q18. Text Solution:

40P + 30P + 50P + 80P = 2700

200P = 2700

10P = 135

City	Male Adult	Female Adult	Children %
A	540		20
B	405	275	15
C	675	225	25
D	1080	320	30

In City B,

85% = 405 + 275 =680

So, 15% = 120 children

In City C,

75% = 675 + 225 = 900

So, 25% =300 children

In City D,

70% = 1080 + 320 = 1400

So, 30% = 600 children

The total adult females in City B and C together = 275 + 225 =500

The total number of children in City C and D together = 300 + 600 = 900

Required difference = 900 - 500 = 400

Q19. Text Solution:

40P + 30P + 50P + 80P = 2700

200P = 2700

10P = 135

City	Male Adult	Female Adult	Children %
A	540		20
B	405	275	15
C	675	225	25
D	1080	320	30

In City B,

85% = 405 + 275 =680

So, 15% = 120 children

In City C,

75% = 675 + 225 = 900

So, 25% =300 children

In City D,

70% = 1080 + 320 = 1400

So, 30% = 600 children

Required average = $\frac{120+300+600}{3} = 340$