Caselet DI for Clerk Prelims Exams

Directions (1 - 5): Read the following passage carefully and answer the given questions.

A shopkeeper sold three different furniture items viz. Tables, Chairs and Sofa in three different month's viz. April, May and June.

- Total tables sold in April is same as total Sofa sold in June and is also 20 more than total tables and total sofa sold in June and April respectively.
- Total tables sold in May is 20 less than the twice the total tables sold in June and is also 20 more than total chairs sold in May.
- Total chairs sold in April and the total sofa sold in May is same, which is twice the total sofa sold in June.
- Total chairs sold in June is twice the total tables sold in June and the total tables sold all the three months together is 400.

1) If the total tables sold in April is 20% more than March which is 25% more than February, then find the total number of tables sold in February?

a) 75
b) 120
c) 80
d) 160
e) None of these

2) What is the ratio between the total chairs and total sofa sold in all the given months together?

a) 21: 23
b) 30: 23
c) 41: 27
d) 33: 37
e) 17: 15

3) If total defective tables sold in April, May and June is 20%, 25% and 30% respectively, then find the total non defective tables sold in all the given months?

a) 452
b) 253
c) 519
d) 301
e) 316

4) Total chairs sold in June is what percentage more/less than the total sofa sold in May?

a) 16.67%
b) 14.285%
c) 12.5%
d) 11.11%
e) 33.33%

5) If the cost price of a chair in April is Rs. 240. It is increased by 20% in May and 25% in June from May, then find the total amount spends to buy total chairs in all the given months?

a) Rs. 157860
b) Rs. 154920
c) Rs. 165240
d) Rs. 198520
e) None of these

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

In a shop, there are four different colour water bottles viz. Pink, Green, Yellow and Red placed in three rows viz. R1, R2 and R3. Number of bottles in each row is same.

- Number of pink bottles in R1 is one more than the number of yellow bottles and green bottles in R1 and R3 respectively.
- Number of yellow bottles in R1 is 5 less than the green bottles, yellow bottles and red bottles in R1, R2 and R3 respectively.
- The ratio of the number of green bottles in R2, red bottles in R3 and pink bottles in R3 is 1: 2: 1.
- Number of red bottles in R2 is 90% of number of red bottles in R3.
- The ratio of the number of pink bottles in R2, yellow bottles in R3 and red bottles in R1 is 8: 9: 7.

- Total number of red bottles in R1 and R3 together is 41 from that R1 has one bottle more than R3.

6) If two bottles taken from R1, then find the probability of getting at least one pink bottle?
a) 251/639
b) 125/639
c) 254/639
d) 173/639
e) 215/639

7) What is the ratio between the number of red bottles and number of green bottles in all the three rows?
a) 51: 62
b) 59: 45
c) 49: 51
d) 63: 48
e) None of these

8) Number of pink bottles in R1 and R2 together is approximately what percentage more/less than the number of yellow bottles in R2?
a) 80%
b) 120%
c) 100%
d) 75%
e) 50%

9) Find the average number of green bottles in all the given rows?
a) 15
b) 12
c) 9
d) 18
e) 21

10) What is the difference between the total pink bottles and total yellow bottles?
a) 8
b) 10
c) 5
d) 15
e) 12

Directions (11 - 15): Read the following information carefully and answer the given questions.
Ram travels **(A)** km distance at the speed of x km/hr and reaches his office in 2 hours. If he increases his speed by 20%, he reached **(B)** hours less than the previous. Shyam travels twice the distance travelled by Ram and reached his office in 6 hours at the speed of 40 km/hr.
Ram carries a bag which contains **(x)** green ball, 5 black ball and 10 pink balls. He takes one ball randomly and the probability of getting a pink ball is 1/2. Shyam also carries a bag which contains (x+1) red caps, (x-1) orange caps and 5 brown caps. He also takes one cap and the probability of getting a brown cap is **(C)**.
Ram's mother bought a scooter with a discount of 20% on labeled price and he again marks up 25%. She offers at 15% discount and sold it to Ram's friend and gained **(D)** %, if the labeled price of the scooter is Rs. 40000.

11) Find the value of (A)
a) 240
b) 180
c) 120
d) 160
e) 150

12) Find the value of (B)
a) 24 mins
b) 20 mins
c) 12 mins
d) 36 mins
e) 40 mins

13) Find the value of (x)
a) 3
b) 4

c) 2
d) 5
e) 6

14) Find the value of (C)
a) 1/2
b) 1/3
c) 1/5
d) 1/4
e) 1/6

15) Find the value of (D)
a) 8.75%
b) 13.5%
c) 15%
d) 12.5%
e) 6.25%

Directions (Q. 16 – 20) Study the following information carefully and answer the given questions:
In the year 2015, the salary expense of a company is 16 lakhs and the total number of employees is 80 and in the year 2016, the average salary of employees is Rs. 4000 more than the previous year. The salary expense in 2016 is 20 % more than the previous year. The other expense in the year 2016 is 34 lakhs. The total expense in the year 2015 and 2016 is same. In the year 2017, the number of employees is 5 less than the previous year. The average salary of employees in the year 2017 is Rs. 15000 and the other expense in the year 2017 is Rs. 47.75 lakhs.
Note:
Salary expense = Average salary of employees * Number of employees
Total expense = Salary expense + other expense

16) The total expense in the year 2015 is approximately what percentage of total expense in the year 2017?
a) 110 %
b) 100 %
c) 75 %
d) 90 %
e) 60 %

17) Find the total average salary of employees in all the given years together?
a) Rs. 59000
b) Rs. 48000
c) Rs. 53000
d) Rs. 56000
e) None of these

18) Find the difference between the number of employees in the year 2015 to that in the year 2017?
a) 10
b) 15
c) 5
d) 12
e) None of these

19) Find the average other expense in all the given years together?
a) 39.65 lakhs
b) 35.72 lakhs
c) 33.58 lakhs
d) 41.25 lakhs
e) None of these

20) The total expense in the year 2017 is approximately what percentage more/less than the other expense in the year 2016?
a) 50 % more
b) 60 % less
c) 75 % more
d) 50 % less
e) 75 % less

Directions (Q. 21 – 25) Study the following information carefully and answer the given questions.
The data is related to the number of travelers (National + International) handled by the travelers company in 4 months in a certain year.

There are national and international travelers. The total number of travelers in June is $3/5^{th}$ of total number of travelers in July. Total number of travelers in July is 1250. The ratio of travelers in June to that of July is 4 : 5. The total number of national travelers in June is 100 less than the total number of travelers in September. The number of international travelers in July is 36 % of total number of travelers in July. The number of international travelers in August is half of the national travelers in July. The number of travelers in August is 225 % of total number of international travelers in August. The ratio of total number of national travelers to that of international travelers in September is 11 : 6.

21) If in the month of October, the total number of travelers is 60 % more than the total number of travelers in August and the ratio of national travelers to international travelers in October is 7 : 3, then find the difference between the total number of national travelers to that of international travelers in October?
a) 524
b) 550
c) 576
d) 592
e) None of these

22) Out of the total number of national travelers (male and female) in June and August together, the ratio of male national travelers to that of female national travelers is 16 : 9. Find the total number of female national travelers in June and August together?
a) 450
b) 480
c) 510
d) 530
e) None of these

23) The total number of international travelers in July is approximately what percentage more/less than the total number of national travelers in August?
a) 20 % more
b) 10 % more
c) 20 % less
d) 10 % less
e) 15 % more

24) If the average number of national travelers in May, June, July, August and September together is 610, then find the ratio between the total number of national travelers in May to that of total number of international travelers in September?
a) 4 : 3
b) 3 : 2
c) 5 : 6
d) 7 : 5
e) None of these

25) Total number of international travelers in June is what percentage of total number of international travelers in August?
a) 62.5 %
b) 58 %
c) 71.5 %
d) 75 %
e) None of these

Directions (Q. 26 - 30): Study the following information carefully and answer the questions given below:
In an organization, there are 8000 employees. Respective ratio of male and female is 3:2. All the employees are distributed in four different department viz. Sales, HR, IT and Marketing. 30% of the males work in Sales department. 25% of the females work in HR department. Respective ratio of number of males and females work in HR department is 5:2. 10% of the males work in IT department and rest of the males work in Marketing department. Number of females work in IT department is 10% more than the number of males work in IT department. 20% of the females

work in Sales department and rest of the females work in marketing department.

26) Find the total number of employees in marketing department?
a) 2442
b) 4323
c) 2112
d) 5444
e) None of these

27) Find the respective ratio of number of males in IT and number of females in HR?
a) 3:5
b) 5:3
c) 2:3
d) 3:2
e) None of these

28) Number of males in HR is what percent of number of females in Marketing?
a) 123.45%
b) 162.33%
c) 133.23%
d) 153.67%
e) None of these

29) Find the difference between number of employees in Sales and IT?
a) 2012
b) 2024
c) 1072
d) 1052
e) None of these

30) Number of females in HR is what percent more than the number of females in Sales?
a) 23%
b) 31%
c) 25%
d) 22%
e) None of these

Answers

Directions (1-5):
Total tables sold in April = Total sofa sold in June = x
Total tables sold in June = x -20
Total sofa sold in April = x – 20
Total tables sold in May = 2 (x-20) – 20 = 2x - 60
Total chairs sold in May = 2x – 60 -20 = 2x - 80
Total chairs sold in April = Total sofa sold in May = 2x
Total chairs sold in June = 2 (x-20) = 2x - 40
Total tables sold in April, May and June = 400
(x + x – 20 + 2x – 60) = 400
4x – 80 = 400
4x = 480
X = 120

	April	May	June
Tables	x=**120**	2x-60 = 2(120)- 60 = 240 – 60 = **180**	x-20=120 - 20 =**100**
Chairs	2x=2*120 = **240**	2x-80 = 2 (120)-80 = 240 – 80 = **160**	2x-40 = 2(120)-40 = 240 -40 = **200**
Sofa	x-20 = 120 - 20 = **100**	2x = 2*120 = **240**	x=**120**

1) Answer: C
Total tables sold in February be x,
According to the question,
X * 125/100 * 120/100 = 120
x = 120 * 100/120 * 100/125
x= 80

2) Answer: B
Required ratio = (240+160+200) : (100+240+120)
= > 600: 460 = 30: 23

3) Answer: D

Total number of non – defective tables
= > 120 * 80/100 + 180 * 75/100 + 100 * 70/100
= > 96 + 135 + 70 = 301

4) Answer: A
Required percentage = (240-200)/240 * 100
= > (40/240) * 100 = 16.67%

5) Answer: E
Total amount (April) = 240 * 240 = 57600
Total amount (May) =240 * 120/100 * 160 = 46080
Total amount (June) = 240 * 120/100 * 125/100 * 200 = 72000
Required total = 57600 + 46080 + 72000 = Rs. 175680

Directions (6 - 10):
Number of pink bottles in R1 = x
Number of yellow bottles in R1 = x-1
Number of green bottles in R3 = x-1
Number of green bottles in R1 = (x-1) +5 = x+4
Number of yellow bottles in R2 = (x-1) +5 = x+4
Number of red bottles in R3 = (x-1) +5 =x+4
Ratio of the number of green bottles in R2, red bottles in R3 and pink bottles in R3 = 1: 2: 1 = y: 2y: y
Number of red bottles in R3 = x+ 4 = 2y => y = (x+4)/2
Number of green bottles in R2 = y = (x+4)/2
Number of pink bottles in R3 = y = (x+4)/2
Number of red bottles in R2 = 90/100 * Number of red bottles in R3
= 90/100 * (x+4)
= 9/10 * (x+4)
Ratio of the number of pink bottles in R2, yellow bottles in R3 and red bottles in R1 = 8: 9: 7 = 8z: 9z: 7z --- (1)
Number of red bottles in R1 and R3 = 41 --- (2)
Number of red bottles in R1 = Number of red bottles in R3 + 1
Number of red bottles in R1 - Number of red bottles in R3 = 1 --- (3)
Solve the equation (2) and (3), we get
Number of red bottles in R1 = 21 and Number of red bottles in R3 = 20
Substitute the value in equation (1)
Number of red bottles in R1 = 21 = 7z => z = 3
Number of pink bottles in R2 = 8z = 8* 3 = 24
Number of yellow bottles in R3 = 9z = 9* 3 = 27
Number of red bottles in R3 = 20 = x+4 => x = 20-4
x=16

	Pink	**Green**	**Yellow**	**Red**
R1	x= **16**	x+4=16+4 =**20**	x-1=16-1 =**15**	**21**
R2	**24**	(x+4)/2 = (16+4)/2 = **10**	x+4 =16 + 4 =**20**	9/10 * (x+4) = (9/10)*20 = **18**
R3	(x+4)/2 = (16+4)/2 = **10**	x-1=16-1 = **15**	**27**	x+4= 16+4 =**20**

Total number of bottles in each row is 72.

6) Answer: C
Required probability = 1 – Probability of none is pink
= > 1 – $56c_2/72c_2$
= > 1 – (56*55/72*71)
= > 1 – 385/639
= > (639-385)/639
= > 254/639

7) Answer: B
Required ratio = (21+18+20) : (20+10+15) = 59: 45

8) Answer: C
Required percentage = [(16+24)-20]/20 * 100
= 20/20 * 100 = 100%

9) Answer: A
Required average = (20+10+15)/3

= 45/3 = 15

10) Answer: E
Required difference = (15+20+27) - (16+24+10)
= 62 – 50 = 12

Directions (11-15):
Total distance travelled by Shyam = 6 * 40 = 240 km
Total distance travelled by Shyam = 2 * Total distance travelled by Ram
240 = 2* Total distance travelled by Ram
240/2 = >**120** = Total distance travelled by Ram **(A)**
Speed of Ram = 120/2 = 60 km/hr
New speed of Ram = 60 * 120/100 = 72 km/hr
New time taken by Ram to cover the same distance = 120/72 =1 hr 40 minutes
Required time = 2 hrs – 1 hr 40 minutes = **20 minutes = (1/3) hour (B)**
Total number of balls in Ram's bag is (15 + x)
Given probability = > 1/2 = $10C_1/(15+x)C_1$
1/2 = 10/(15+x)
20 = 15 +x = >**x =5** green balls
Number of red, orange and brown caps in Shyam's bag is 6, 4 and 5 respectively.
Required probability = $5C_1/15C_1$ = 5/15 **= 1/3 (C)**
Labeled price of a scooter = 40000
CP of the scooter = 40000 * 80/100 = 32000
Marked price of the scooter = 32000 * 125/100 = 40000
Selling price of the scooter = 40000 * 85/100 = 34000
Profit percentage = (34000 - 32000)/32000 * 100
= > 2000/32000 * 100 = **6.25% (D)**

11) Answer: C
Total distance travelled by Ram = **120(A)**

12) Answer: B
Required time = 2 hrs– 1 hr 20 minutes = **20 minutes (B)**

13) Answer: D
x =5 green balls

14) Answer: B
Required probability = $5C_1/15C_1$ = 5/15 **= 1/3 (C)**

15) Answer: E
Profit percentage = [(34000 - 32000)/32000] * 100
= (2000/32000) * 100 = **6.25% (D)**

Directions (16 - 20):
Explanation:
In the year 2015,
The salary expense of a company = 16 lakhs
The total number of employees = 80
Average salary of employees = 1600000/80 = Rs. 20000
In the year 2016,
The average salary of employees = Rs. 1000 + Average salary of employees in 2015
= > 4000 + 20000 = Rs. 24000
The salary expense in 2016 = (120/100)*16 = 19.2 lakhs
The other expense in the year 2016 = 34 lakhs
Total expense in the year 2016 = 19.2 + 34 = 53.2 lakhs
The number of employees in 2015 = 1920000/24000 = 80
The total expense in the year 2015 and 2016 is same. So,
The total expense in the year 2015 = 53.2 lakhs
The other expense in the year 2015 = 53.2 – 16 = 37.2 lakhs
The average salary of employees in the year 2017 = Rs. 15000
The other expense in the year 2017 = Rs. 47.75 lakhs
The number of employees in 2017 = 80 – 5 = 75
The salary expense in 2017 = 75*15000 = 11.25 lakhs
The total expense in the year 2017 = 47.75 + 11.25 = 59 lakhs

Year	Average salary of employ	Number of employees	Salary expense	Other expense (In	Total expense (In

	ees (In Rs.)		(In lakhs)	lakhs)	lakhs)
2015	20000	80	16	37.2	53.2
2016	24000	80	19.2	34	53.2
2017	15000	75	11.25	47.75	59

16) Answer: D
The total expense in the year 2015 = 53.2 lakhs
The total expense in the year 2017 = 59 lakhs
Required % = (53.2/59)*100 = 90 %

17) Answer: A
The total average salary of employees in all the given years together
= > 20000 + 24000 + 15000 = Rs. 59000

18) Answer: C
The number of employees in the year 2015 = 80
The number of employees in the year 2017 = 75
Required difference = 80 – 75 = 5

19) Answer: A
The average salary expense in all the given years together
= > (37.2 + 34 + 47.75)/3
= > 118.95/3 = 39.65 lakhs

20) Answer: C
The total expense in the year 2017 = 59
The other expense in the year 2016 = 34
Required % = [(59 – 34)/34]*100 = 75 % more

Directions (Q. 21 – 25)
Explanation:
Total number of travelers in July = 1250
The total number of travelers in June = (3/5)*total number of travelers in July
= > (3/5)*1250 = 750
The ratio of travelers in June to that of July = 4 : 5 (4x, 5x)
5x = 1250
X = 250
Total number of travelers in June = 4x = 1000
The total number of national travelers in June = 100 less than the total number of travelers in September
= > 750 = Total travelers in September – 100
Total number of travelers in September = 750 + 100 = 850
The number of international travelers in July = (36/100)*total number of travelers in July.
The number of international travelers in July = (36/100)*1250 = 450
The number of national travelers in July = 1250 – 450 = 800
The number of international travelers in August = (1/2)*National travelers in July
= > (1/2)*800 = 400
The number of travelers in August = (225/100)*total number of international travelers in August
= > (225/100)*400 = 900
The number of national travelers in August = 900 – 400 = 500
The ratio of total number of national travelers to that of international travelers in September = 11 : 6 (11x, 6x)
17x = 850
X = 50
The total number of national travelers in September = 11x = 550
The total number of international travelers in September = 6x = 300

Month	National travelers	International travelers	Total travelers
June	750	250	1000
July	800	450	1250
August	500	400	900
September	550	300	850

21) Answer: C

The total number of travelers in October = (160/100)*the total number of travelers in August
= > (160/100)*900 = 1440
The ratio of national travelers to international travelers in October
= > 7 : 3 (7x, 3x)
10x = 1440
X = 144
The difference between the total number of national travelers to that of international travelers in October
= > 4x = 144*4 = 576

22) Answer: a)
The total number of national travelers (male and female) in June and August together
= > 750 + 500 = 1250
The ratio of male national travelers to that of female national travelers
= > 16 : 9 (16x, 9x)
25x = 1250
X = 50
The total number of female national travelers in June and August together
= > 9x = 9*50 = 450

23) Answer: d)
The total number of international travelers in July = 450
The total number of national travelers in August = 500
Required % = [(500 – 450)/500]*100 = 10 % less

24) Answer: b)
The average number of national travelers in May, June, July, August and September together = 610
The total number of national travelers in May, June, July, August and September together = 610*5 = 3050
The total number of national travelers in May
= > 3050 – (750 + 800 + 500 + 550) = 450
The total number of international travelers in September = 300
Required ratio = 450 : 300 = 3 : 2

25) Answer: a)
Total number of international travelers in June = 250
Total number of international travelers in August = 400
Required % = (250/400)*100 = 62.5 %

Directions (26 - 30):
Total number of employees = 8000
Number of male employees = 8000 * 3/5 = 4800
Number of female employees = 8000 * 2/5 = 3200
No. of male employees in sales department = 4800 * 30/100 = 1440
No of females in HR department = 25/100 * 3200 = 800
No of males in HR department =800/2 * 5 =2000
No of males in IT department = 10/100 * 4800 = 480
Number of males in Marketing department = 4800 – (1440+2000+480)
= 880
No of females in IT department = 110/100 * 480 = 528
No of females in sales department = 20/100 * 3200 = 640
No of females in Marketing department =3200 – (800+528+640)
= 1232

Departments	Males	Females
Sales	1440	640
IT	480	528
HR	2000	800
Marketing	880	1232

26) Answer: C
Total number of employees in marketing department = 880 + 1232 = 2112

27) Answer: A
Required ratio = 480: 800 = 3:5

28) Answer: B
Required percentage = (2000/1232) x 100 = 162.33%

29) Answer: C
Number of employees in Sales = 1440 + 640 = 2080
Number of employees in IT = 480 + 528 = 1008
Required difference = 2080 – 1008 = 1072

30) Answer: C
Required percentage = (800 – 640)/640 x 100 = (160/640) x 100 = 25%