

IBPS RRB 2022

15 Most Important Questions on Caselet

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Direction(1-5): Study the following information carefully and answer the related questions.

In a city of 1000 families, people read newspaper among three newspapers, The Hindu, The Times of India and Hindustan Times. 20 families do not read any newspaper. The number of families that read The Hindu is 420, the families who read The Times of India is 500 and the families that use only Hindustan Times are 100 and there are 50 families who read all the three newspapers.

1. If the number of families read only the times of India is 210 and number of families that read The Hindu and The Times of India both but not Hindustan Times is 120, then find the number of families that read both The Times of India and Hindustan times but not The Hindu.

- A. 210
- B. 180
- C. 120
- D. 100
- E. None of these

2. If the number of families who read The Hindu only is 200, the number of families read The times of India only is 210 and 90 families read both Hindustan Times and The Times of India, then find out the number of families that read exactly two newspapers.

- A. 200
- B. 180
- C. 170
- D. 210
- E. None of these

3. What is the number of families who do not read The Hindu newspaper but read any other newspaper?

- A. 520
- B. 560
- C. 210
- D. 620
- E. None of these

4. If 200 families read only the Hindu and sometime The Hindu newspaper banned in the city due to which 60% of families who read only The Hindu shifted to Hindustan Times and 40% shifted to The Times of India. and number of families that read only The times of India initially was 100% more than the families who read only Hindustan Times initially , then find out the number of families who read only The Times of India or none after the shift.

- A. 300
- B. 220
- C. 280
- D. 420
- E. None of these

5. If Families that read only The Times of India is 210 and only The Hindu is 200 and also number of families that read The Times of India and Hindustan Times both is 90, then find out the number of families that read at least two newspapers.

- A. 300
- B. 210
- C. 260
- D. 440
- E. None of these

Direction(6-10): Study the following information carefully and answer the related questions.

Following information gives the data regarding number of students applied for five different government exams viz. IBPS, SSC, UPSC, PSUs and Railways.

Total number of aspirants applied for UPSC is 80000 more than the number of aspirants applied for PSUs. Number of aspirants applied for IBPS is 2400000, which is 30% of the total number of aspirants applied for all five government exams. 23% and 18% of total aspirants applied for SSC and Railways respectively. Vacancies in IBPS are 500 more than the vacancies in SSC and half of the vacancies in Railways. There are total 5000 vacancies in UPSC which are 1800 more than PSUs and 4000 less than IBPS.



6. Total vacancies in all government exams together are approximately what percent of average number of aspirants of five exams?

- A. 2%
- B. 2.75%
- C. 4.50%
- D. 3.25%
- E. 6%

7. If 20% of aspirants applied for IBPS are from UP and 30% of aspirants applied for SSC are from Karnataka, then find the difference between number of aspirants who applied for IBPS from UP and number of aspirants who applied for SSC from Karnataka?

- A. 68000
- B. 69500
- C. 71650
- D. 72000
- E. None of these

8. What is the ratio of vacancies in UPSC and SSC together to the vacancies in IBPS and PSUs together?

- A. 122: 135
- B. 102: 97
- C. 121: 103
- D. 43: 47
- E. None of the above

9. If 40% and 60% aspirants who applied for Railways and SSC respectively are males, then find the difference between number of male aspirants and female aspirants who applied for SSC and Railways together?

- A. 80000
- B. 75000
- C. 70000
- D. 65000
- E. None of these

10. What was the difference between 50% of vacancies of Railways and the average of vacancies of IBPS and SSC together?

- A. 150
- B. 200

- C. 250
- D. 300
- E. 350

Direction(11-13): Answer the questions based on the information given below.

Vishal and Varun started a business with initial investments of Rs. 1500 and Rs. 1800, respectively. After one year, Vishal and Varun made additional investments of Rs. 200 and Rs. 400, respectively. In this business, Vishal is an active working partner so 20% of the profit is given to him for managing the business and rest of the profit is shared between them in the ratio of their investments. Profit share of Vishal out of the total profit of Rs. 9000 after two years is Rs. [A]. Varun invested his profit share in a scheme offering 10% compound interest for three years compounded annually and earned an interest of Rs. [B]. Vishal spent 30% and 25% of the amount received by him as a profit share for entertainment and transportation. Out of the remaining amount, he gave one third to his mother and was left with Rs. [C].

11. Raman bought an article for Rs. [A] and marked it at 30% above its cost price, and sold it after offering a discount of 20%. Find the profit earned by Raman in this transaction.

- A. Rs. 200
- B. Rs. 250
- C. Rs. 300
- D. Rs. 400
- E. None of these

12. Find the average of [A], [B] and [C].

- A. Rs. 2596
- B. Rs. 2602
- C. Rs. 2608
- D. Rs. 2614
- E. None of these

13. Vishal invested Rs. [C] in a scheme offering 13% simple interest. For how much time did Vishal invest the amount so as to earn an interest of Rs. 1170?



- A. 5 years
- B. 6 years
- C. 7 years
- D. 8 years
- E. None of these

Direction(14-16): Study the following information carefully and answer the questions that follow.

Anil started from city X at 10:00 AM and travelled towards city Y. After one hour, Sunil started from Y and travelled towards X. The total time taken by Anil and Sunil for their journey are $(k + 2)$ hours and k hours respectively. They met each other at 7:00 PM. The speed of Sunil is 7 kmph more than that of Anil.

14. Find the total time taken by Anil for his journey.
- A. 16 hours
 - B. 14 hours

- C. 20 hours
- D. 18 hours
- E. None of these

15. What is the distance between X and Y?

- A. 1134 km
- B. 952 km
- C. 1024 km
- D. 1008 km
- E. None of these

16. If Sunil took a break from 2:00 PM to 3:42 PM, when would the two meet?

- A. 7:30 PM
- B. 7:36 PM
- C. 7:42 PM
- D. 7:48 PM
- E. 7:54 PM



Answer & Solution:

Answer 1. C

It is given that the number of families in the city = 1000

Number of families that read The Hindu = 420

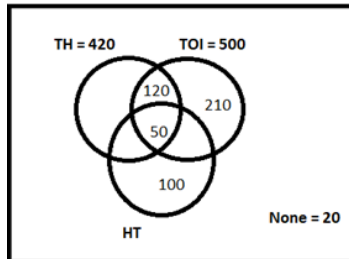
Number of families that read the times of India = 500

Number of families that read only Hindustan Times = 100

Number of families who do not read any newspaper = 20

Number of families who read all the three newspapers = 50

In the question it is given that 210 families read only the times of India and 120 families read both The Hindu and the times of India but not Hindustan Times.



Now the number of families who read The Times of India and Hindustan times both but not The Hindu

$$= 500 - 210 - 120 - 50 = 500 - 380 = 120$$

Answer 2. D

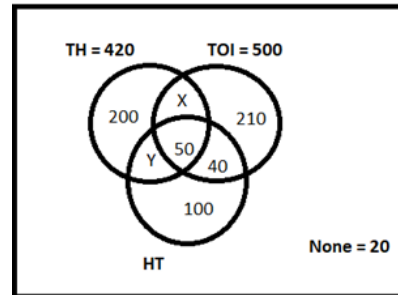
Solution:

Number of families who read only The Hindu = 200

Number of families who read The Times of India only = 210

Number of families who read both Hindustan Times and The Times of India = 90

Number of families that read the Hindustan Times and The Times of India but not The Hindu = 90 - 50 = 40



Here, $X + Y + 50 + 200 = 420$

$$X + Y = 420 - 250$$

$$X + Y = 170$$

Families that read exactly two newspapers = $X + Y + 40 = 170 + 40 = 210$

Answer 3. B

Solution:

Total number of families in the city = 1000

The number of families that read The Hindu newspaper = 420

The number of families who do not read any newspaper = 20

Number of families who do not read The Hindu but other newspapers = $1000 - 420 - 20 = 560$.

Answer 4. A

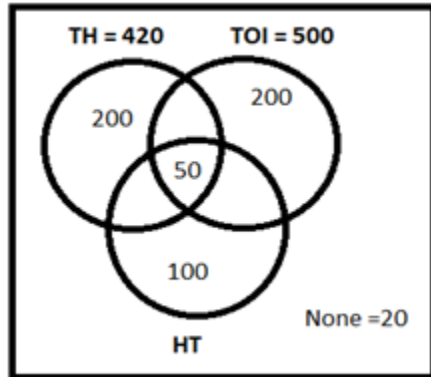
Solution:

The number of families reading only The Hindu initially = 200

Number of families that read only Hindustan times initially = 100

Number of families reading the times of India initially = 100% more than 100 = 200

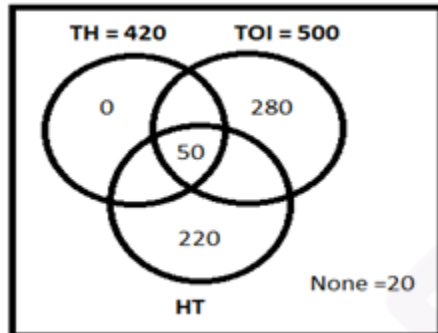




When the Hindu newspaper banned in the city,

Then number of families that read only Hindustan times = $100 + 120 = 220$

Number of families that read only the Times of India = $200 + 80 = 280$



Now after shift in the customers,
Number of families who read only The Times of India = 280

Number of families that use none = 20

Then number of families who read only The Times of India or none = $280 + 20 = 300$

Answer 5. C

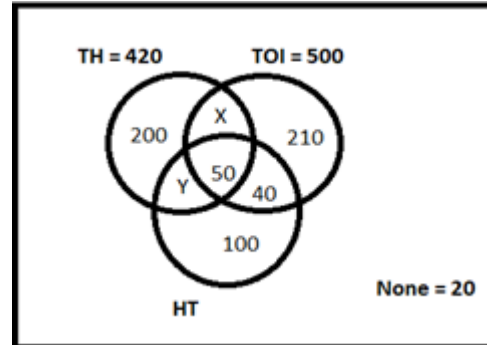
Solution:

It is given that the number of families that read only The Hindu = 200

And number of families that use only The Times of India = 210

The number of families that use The Times of India and Hindustan Times both = 90

Number of families that read The Times of India and Hindustan Times both but not The Hindu = $90 - 50 = 40$



Now the number of families that use exactly two newspapers = $X + Y + 40$

$420 = 200 + X + Y + 50$

$X + Y = 170$

Number of families that read exactly two newspapers = $X + Y + 40 = 170 + 40 = 210$

Now number of families that read exactly three newspapers = 50

Number of families that read at least two newspapers = $210 + 50 = 260$

Answer 6. B

Common solution: Number of aspirants applied for IBPS = 2400000

Total number of aspirants of five exams = $\frac{100}{30} \times 2400000 = 8000000$

Number of aspirants applied for SSC = $23\% \text{ of } 8000000 = 1840000$

Number of aspirants applied for Railways = $18\% \text{ of } 8000000 = 1440000$

Number of aspirants applied for UPSC = Aspirants applied for PSU + 80000

$8000000 = \text{Aspirants applied for PSUs} + 80000 + \text{Aspirants applied for PSUs} + 2400000 + 1840000 + 1440000$

Number of aspirants applied for PSUs = 1120000

Number of aspirants applied for UPSC = $1120000 + 80000 = 1200000$

Vacancies in UPSC = 5000

Vacancies in PSUs = $5000 - 1800 = 3200$



$$\begin{aligned} \text{Vacancies in IBPS} &= 5000 + 4000 = 9000 \\ \text{Vacancies in SSC} &= 9000 - 500 = 8500 \\ \text{Vacancies in railways} &= 2 \times 9000 = 18000 \end{aligned}$$

Solution: Total vacancies =
 $9000 + 8500 + 18000 + 5000 + 3200 = 43700$
 Average number of aspirants of five exams = $\frac{800000}{5} = 160000$
 Required percentage = $\frac{43700}{160000} \approx 2.75\%$

Answer 7. D
 Solution:
 Number of aspirants applied for IBPS from UP = $20\% \text{ of } 2400000 = 480000$
 Number of aspirants applied for SSC from Karnataka = $30\% \text{ of } 1840000 = 552000$
 Required difference = $552000 - 480000 = 72000$

Answer 8. E
 Solution: Vacancies in UPSC and SSC together = $5000 + 8500 = 13500$
 Vacancies in IBPS and PSUs together = $9000 + 3200 = 12200$
 Required ratio = $13500 : 12200 = 135 : 122$

Answer 9. A
 Solution: Total number of male aspirants who applied for SSC and Railways together = $40\% \text{ of } 1440000 + 60\% \text{ of } 1840000 = 1680000$
 Total number of female aspirants who applied for SSC and railways together = $60\% \text{ of } 1440000 + 40\% \text{ of } 1840000 = 1600000$
 Therefore, required difference = $1680000 - 1600000 = 80000$

Answer 10. C
 Solution:
 Average of vacancies of IBPS and SSC together = $\frac{9000+8500}{2} = 8750$
 50% of vacancies of railways = $50\% \text{ of } 18000 = 9000$
 Therefore, required difference = $9000 - 8750 = 250$

Answer 11. A
 Common solution:
 Ratio of profit share of Vishal: Varun = $(1500 \times 12 + 1700 \times 12) : (1800 \times 12 + 2200 \times 12) = 4 : 5$
 Profit share of Vishal for being active working partner = $0.20 \times 9000 = \text{Rs. } 1800$
 Profit share of Vishal for his investment = $0.80 \times 9000 \times \frac{4}{9} = \text{Rs. } 3200$
 So, the total profit share of Vishal = $1800 + 3200 = \text{Rs. } 5000$
 So, the value of A = 5000
 Profit share of Varun = $9000 - 5000 = \text{Rs. } 4000$

Interest earned by Varun after three years = $4000 \times \{(1 + 0.10)^3 - 1\} = \text{Rs. } 1324$
 So, the value of B = 1324
 Amount spent by Vishal on entertainment and transportation together = $0.55 \times 5000 = \text{Rs. } 2750$
 Amount given by Vishal to mother = $\frac{5000-2750}{3} = \text{Rs. } 750$
 Amount left with Vishal = $5000 - 2750 - 750 = \text{Rs. } 1500$
 So, the value of C = 1500

Solution: Cost price of the article = A = Rs. 5000
 Marked price of the article = $1.30 \times 5000 = \text{Rs. } 6500$



Selling price of the article =
 $0.80 \times 6500 = \text{Rs. } 5200$
 So, the profit earned =
 $5200 - 5000 = \text{Rs. } 200$

Answer 12. C

Solution:

$$\frac{\text{Required}}{3} = \frac{\text{average}}{3} = \frac{5000+1324+1500}{3} = \frac{7824}{3} = \text{Rs. } 2608$$

Answer 13. B

Solution:

Let the time for which Vishal invested the money = x years

So, according to the question,

$$1500 \times 0.13 \times x = 1170$$

$$\Rightarrow x = \frac{1170}{195}, x = 6$$

So, the time for which Vishal invested the money = 6 years

Answer 14. D

Solution: Let the distance between the two cities be d km.

The distance travelled by Anil in one hour

$$= \frac{d}{k+2}$$

$$\text{Remaining distance} = d \left[1 - \frac{1}{k+2} \right] \Rightarrow d$$

$$\left[\frac{k+1}{k+2} \right] \text{ km}$$

Given,

$$\frac{d \left(\frac{k+1}{k+2} \right)}{\frac{d}{k+2} + \frac{d}{k}} = 8$$

$$\Rightarrow \frac{k}{2} = 8 \Rightarrow k = 16$$

Required number of hours taken by Anil = $16+2 = 18$ hours

Answer 15. D

Solution: The ratio of speeds of Anil and Sunil = $\frac{d}{k+2} : \frac{d}{k} = \frac{1}{18} : \frac{1}{16} = 8 : 9$

Let the speeds of Anil and Sunil be 8x and 9x respectively.

$$\text{Now, } 9x - 8x = 7$$

$$\Rightarrow x = 7$$

Therefore speeds of Anil and Sunil are 56 kmph and 63 kmph respectively.

$$\therefore \text{Required total distance} = 63 \times 16 = 1008 \text{ km.}$$

Answer 16. E

Solution: From 10:00 AM to 11:00 AM, Anil covered 56 km. Sunil takes a break from 2:00 PM to 3:42 PM. We can assume that he starts at 12:42 PM and proceeds without a break

(We transfer the break to the beginning of Sunil's travel, rather than let it be in the middle) From 10:00 AM to 12:42 PM, Anil cover 56 (2.7), i.e. 151.2 km. The distance between them, at this stage would be $1008 - 151.2$, i.e. 856.8 km together, the two would take $856.8 / 119$, i.e. 7.19 hr, which is 7.54 PM

