IBSAT Data Adequacy & Data Interpretation

Sample Paper – 1

Duration: 26 Minutes **Maximum Marks: 30**

Instructions

- This paper contains **30** Multiple Choice Questions (Single Correct Answer), modelled on the Data Adequacy and Data Interpretation section of **IBSAT** (ICFAI Business School Aptitude Test).
- Each correct answer carries **+1 mark**. There is **no negative marking** for incorrect or unattempted answers, so attempt every question.
- Only **one** option is correct. Choose the most appropriate answer.
- IBSAT is a computer-based test with no sectional time limit; attempt this practice paper in one timed sitting of about **26 minutes**.
- Use of mobile phones, calculators, log tables, or electronic gadgets is strictly prohibited.

Part A: Table Interpretation

Directions (Q1–Q5): The table below shows the sales (in Rs. lakh) of four product categories across the five branches of Zenith Retail in a year. Study it and answer the questions.

Branch	Electronics	Apparel	Grocery	Furniture	Total
North	40	30	50	20	140
South	35	45	40	30	150
East	50	25	45	20	140
West	30	40	35	25	130
Central	45	35	35	40	155

Q1. What is the total sales of the South branch across all four categories (in Rs. lakh)?

(A) 140

(B) 150

(C) 155

(D) 130

Q2. Which branch recorded the highest total sales?

(A) South

(B) North

(C) Central

(D) East

Q3. What is the total Electronics sales across all five branches (in Rs. lakh)?

(A) 175

(B) 205

(C) 200

(D) 135

Q4. What is the ratio of Electronics sales in the East branch to Furniture sales in the North branch?

(A) 5 : 2

(B) 2 : 5

(C) 3 : 2

(D) 5 : 3

Q5. What is the average Furniture sales per branch (in Rs. lakh)?

(A) 30

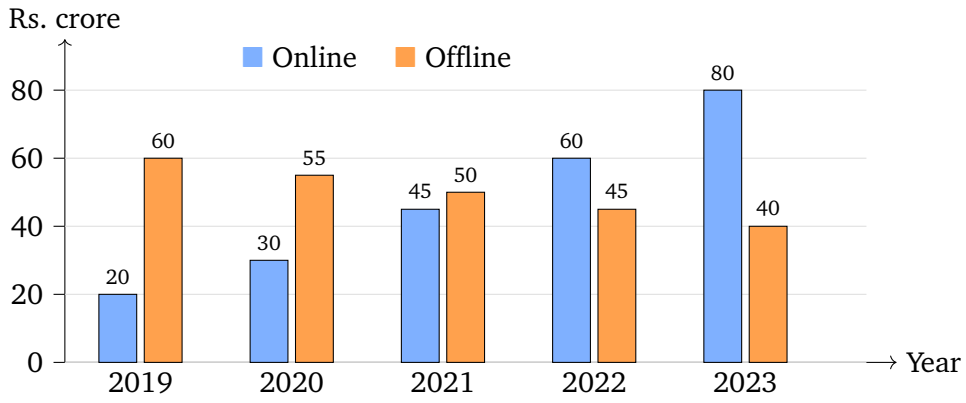
(B) 25

(C) 27

(D) 29

Part B: Bar Graph Interpretation

Directions (Q6–Q10): The bar graph shows the Online and Offline revenue (in Rs. crore) of Zenith Retail over five years. Study it and answer the questions.



Q6. What was the total revenue (Online + Offline) of Zenith Retail in 2021 (in Rs. crore)?

(A) 90

(B) 95

(C) 100

(D) 105

Q7. In which year did Online revenue first exceed Offline revenue?

(A) 2021

(B) 2020

(C) 2022

(D) 2023

Q8. What is the percentage increase in Online revenue from 2019 to 2023?

(A) 200%

(B) 250%

(C) 400%

(D) 300%

Q9. What is the total Offline revenue over the five years (in Rs. crore)?

(A) 250

(B) 240

(C) 260

(D) 230

Q10. What is the ratio of Online to Offline revenue in the year 2020?

(A) 5 : 11

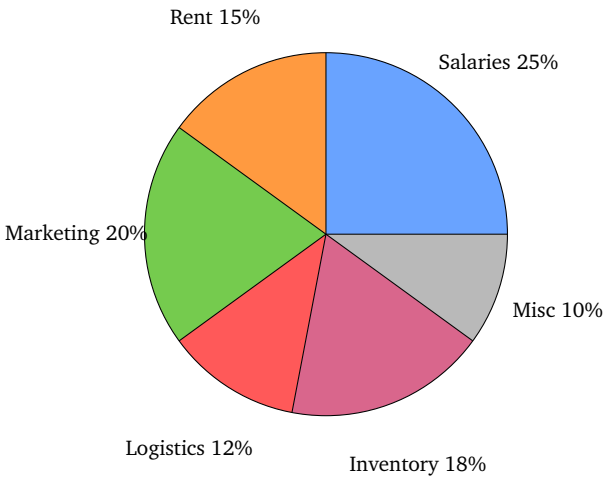
(B) 6 : 11

(C) 3 : 5

(D) 6 : 13

Part C: Pie Chart Interpretation

Directions (Q11–Q14): The pie chart shows the percentage distribution of the total annual expenditure of Zenith Retail, which is Rs. 720 crore. Study it and answer the questions.



Q11. How much does Zenith Retail spend on Marketing (in Rs. crore)?

(A) 120

(B) 144

(C) 150

(D) 108

Q12. Which expense head has the second highest share of the total expenditure?

(A) Salaries

(B) Inventory

(C) Marketing

(D) Rent

Q13. By how much does the Salaries expense exceed the Rent expense (in Rs. crore)?

(A) 72

(B) 60

(C) 90

(D) 108

Q14. What is the central angle of the Logistics slice in the pie chart?

(A) 36°

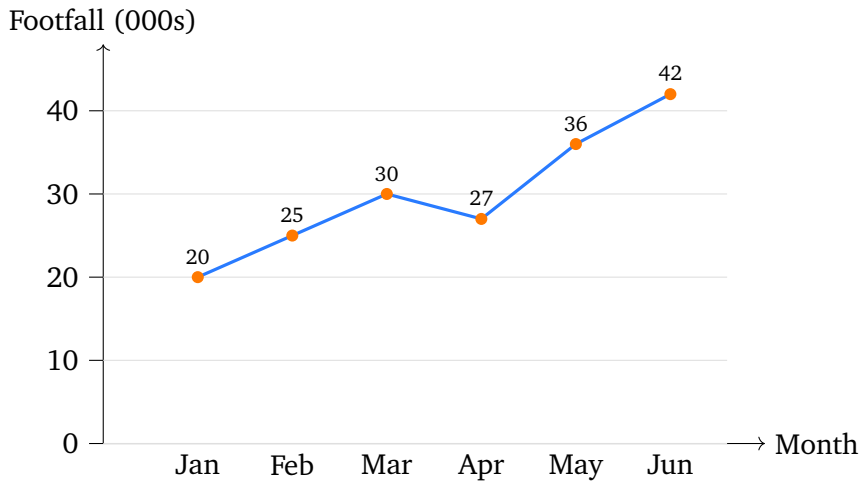
(B) 43.2°

(C) 48°

(D) 40°

Part D: Line Graph Interpretation

Directions (Q15–Q18): The line graph shows the monthly footfall (in thousands of customers) at a Zenith Retail flagship store from January to June. Study it and answer the questions.



Q15. What is the total footfall over the six months (in thousands)?

(A) 170

(B) 175

(C) 180

(D) 185

Q16. In which month was the increase in footfall over the previous month the highest?

(A) February

(B) June

(C) March

(D) May

Q17. What is the percentage drop in footfall from March to April?

(A) 10%

(B) 6%

(C) 12%

(D) 8%

Q18. What is the average monthly footfall over the six months (in thousands)?

(A) 28

(B) 30

(C) 32

(D) 29

Part E: Caselet Interpretation

Directions (Q19–Q22): Read the caselet and answer the questions.

Zenith Retail employs **1200** workers. Of these, **60%** are men and the rest are women. Among the men, **25%** work in the warehouse and the remaining work in stores. Among the women, **40%** work in the warehouse and the remaining work in stores.

Q19. How many women does Zenith Retail employ?

(A) 720

(B) 480

(C) 540

(D) 600

Q20. How many men work in the stores?

(A) 540

(B) 180

(C) 288

(D) 720

Q21. What is the total number of workers in the warehouse?

(A) 360

(B) 400

(C) 372

(D) 468

Q22. What is the ratio of men in the warehouse to women in the warehouse?

(A) 16 : 15

(B) 5 : 6

(C) 15 : 16

(D) 3 : 4

Part F: Data Sufficiency

Directions (Q23–Q30): Each question is followed by two statements, I and II. Decide whether the data given in the statements are sufficient to answer the question, and mark:

(A) if Statement I alone is sufficient, but Statement II alone is not;

(B) if Statement II alone is sufficient, but Statement I alone is not;

(C) if both statements together are sufficient, but neither alone is sufficient;

(D) if even both statements together are not sufficient.

Q23. What is the value of x?

I. $3x - 6 = 9$. **II.** x is greater than 2.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q24. Is the integer N even?

I. N is divisible by 3. **II.** N is divisible by 4.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q25. What is the total cost of 5 pens and 3 pencils?

I. Each pen costs Rs. 10. **II.** Each pencil costs Rs. 4.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q26. What is the value of the positive integer x?

I. x is a positive integer. **II.** x is less than 10.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q27. What is the perimeter of the square?

I. The area of the square is more than 20 cm^2. **II.** The side of the square is 6 cm.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q28. What is the cost price of the article?

I. The article was sold for Rs. 120 at a profit of 20%. **II.** The profit earned was Rs. 20.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q29. How many girls are there in the class?

I. There are 40 students in the class. **II.** The ratio of boys to girls is $3 : 2$.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q30. What is the two-digit number?

I. The sum of its digits is 8. **II.** The difference of its digits is 4.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Detailed Solutions

Q1.

Solution

Concept — Table Reading: The total for a branch is the sum of its four category values, which is already given in the last column.

Step 1 — Locate the South row:

$$\text{Electronics} = 35,\ \text{Apparel} = 45,\ \text{Grocery} = 40,\ \text{Furniture} = 30.$$

Step 2 — Add the four values:

$$35 + 45 = 80.$$

Step 3 — Continue the addition:

$$80 + 40 = 120, \qquad 120 + 30 = 150.$$

Why other options are wrong:

- Option A: 140 is the North (and East) total, not South.
- Option C: 155 is the Central total.
- Option D: 130 is the West total.

Final Answer: South total $= 150$ Rs. lakh $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q1

Q2.

Solution

Concept — Comparing Totals: Read the Total column and pick the largest value.

Step 1 — List the branch totals:

$$\text{North} = 140,\ \text{South} = 150,\ \text{East} = 140,\ \text{West} = 130,\ \text{Central} = 155.$$

Step 2 — Compare the values:

$$155 > 150 > 140 = 140 > 130.$$

Step 3 — Identify the highest:

$$\text{Central} = 155 \text{ is the maximum.}$$

Why other options are wrong:

- Option A: South is second at 150.
- Option B: North is 140.
- Option D: East is 140.

Final Answer: Central has the highest total $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q2

Q3.

Solution

Concept — Column Sum: Add the Electronics value down every branch row.

Step 1 — List the Electronics values:

$$40,\ 35,\ 50,\ 30,\ 45.$$

Step 2 — Add in pairs:

$$40 + 35 = 75, \qquad 50 + 30 = 80.$$

Step 3 — Combine the running totals:

$$75 + 80 = 155, \qquad 155 + 45 = 200.$$

Why other options are wrong:

- Option A: 175 is the Apparel column total.
- Option B: 205 is the Grocery column total.
- Option D: 135 is the Furniture column total.

Final Answer: Total Electronics sales $= 200$ Rs. lakh $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q3

Q4.

Solution

Concept — Ratio: Write the two required values as a ratio, then divide both by their common factor.

Step 1 — Read the two values:

$$\text{East Electronics} = 50, \qquad \text{North Furniture} = 20.$$

Step 2 — Form the ratio:

$$50 : 20.$$

Step 3 — Divide both parts by 10:

$$50 : 20 = 5 : 2.$$

Why other options are wrong:

- Option B: $2 : 5$ inverts the ratio.
- Option C: $3 : 2$ uses the wrong values.
- Option D: $5 : 3$ misreads the Furniture value.

Final Answer: Ratio $= 50 : 20 = 5 : 2 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q4

Q5.

Solution

Concept — Average: Average $= \dfrac{\text{sum of the values}}{\text{number of values}}$.

Step 1 — List the Furniture values:

$$20,\ 30,\ 20,\ 25,\ 40.$$

Step 2 — Add them:

$$20 + 30 + 20 + 25 + 40 = 135.$$

Step 3 — Divide by the 5 branches:

$$\frac{135}{5} = 27.$$

Why other options are wrong:

- Option A: 30 divides a wrong total.
- Option B: 25 undercounts the sum.
- Option D: 29 rounds incorrectly.

Final Answer: Average Furniture sales $= \frac{135}{5} = 27$ Rs. lakh $\Rightarrow$ C

Answer: (C) Go Back to Q5

Q6.

Solution

Concept — Reading Grouped Bars: For a single year, add the Online bar and the Offline bar.

Step 1 — Read the 2021 bars:

$$\text{Online} = 45, \qquad \text{Offline} = 50.$$

Step 2 — Add the two:

$$45 + 50 = 95.$$

Why other options are wrong:

- Option A: 90 reads one bar too low.
- Option C: 100 rounds both bars up.
- Option D: 105 uses the 2022 values.

Final Answer: Total 2021 revenue $= 45 + 50 = 95$ Rs. crore $\Rightarrow$ B

Answer: (B) Go Back to Q6

Q7.

Solution

Concept — Trend Comparison: Find the first year in which the Online bar is taller than the Offline bar.

Step 1 — Compare each year:

$$2019: \ 20 < 60, \quad 2020: \ 30 < 55, \quad 2021: \ 45 < 50.$$

Step 2 — Continue to the next year:

$$2022: \ 60 > 45.$$

Step 3 — Identify the first crossing:

$$\text{Online first exceeds Offline in } 2022.$$

Why other options are wrong:

- Option A: In 2021 Online (45) is still below Offline (50).
- Option B: In 2020 Online is well below Offline.
- Option D: 2023 is a later year; the crossing already happened in 2022.

Final Answer: Online first exceeds Offline in 2022 $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q7

Q8.

Solution

Concept — Percentage Increase: Percentage increase $= \dfrac{\text{final} - \text{initial}}{\text{initial}} \times 100.$

Step 1 — Read the two Online values:

$$2019 = 20, \qquad 2023 = 80.$$

Step 2 — Find the increase:

$$80 - 20 = 60.$$

Step 3 — Divide by the initial value and multiply by 100:

$$\frac{60}{20} \times 100 = 300\%.$$

Why other options are wrong:

- Option A: 200% uses an increase of 40.
- Option B: 250% has no valid basis here.
- Option C: 400% divides by 15 instead of 20.

Final Answer: Increase $= \frac{60}{20} \times 100 = 300\% \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Column/Series Sum: Add the Offline value across all five years.

Step 1 — List the Offline values:

$$60,\ 55,\ 50,\ 45,\ 40.$$

Step 2 — Add in pairs:

$$60 + 40 = 100, \qquad 55 + 45 = 100.$$

Step 3 — Add the remaining term:

$$100 + 100 + 50 = 250.$$

Why other options are wrong:

- Option B: 240 drops 10 somewhere.
- Option C: 260 adds an extra 10.
- Option D: 230 undercounts the series.

Final Answer: Total Offline revenue $= 250$ Rs. crore $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Ratio from a Bar Graph: Read both bars for the year and reduce the ratio.

Step 1 — Read the 2020 bars:

$$\text{Online} = 30, \qquad \text{Offline} = 55.$$

Step 2 — Form the ratio:

$$30 : 55.$$

Step 3 — Divide both parts by 5:

$$30 : 55 = 6 : 11.$$

Why other options are wrong:

- Option A: $5 : 11$ misreads the Online bar as 25.
- Option C: $3 : 5$ does not reduce from $30 : 55$.
- Option D: $6 : 13$ misreads the Offline bar.

Final Answer: Ratio $= 30 : 55 = 6 : 11 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q10

Q11.

Solution

Concept — Percentage of a Total: A slice value = slice percent $\times$ total.

Step 1 — Read the Marketing share:

$$\text{Marketing} = 20\%.$$

Step 2 — Apply it to the total expenditure Rs. 720 crore:

$$\frac{20}{100} \times 720.$$

Step 3 — Compute:

$$0.20 \times 720 = 144.$$

Why other options are wrong:

- Option A: 120 uses a 16.67% share.
- Option C: 150 has no valid basis.
- Option D: 108 uses the 15% Rent share.

Final Answer: Marketing spend $= 20\%$ of $720 = 144$ Rs. crore $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q11

Q12.

Solution

Concept — Ranking Shares: Order the percentages and pick the second largest.

Step 1 — List the shares:

Salaries $= 25$, Marketing $= 20$, Inventory $= 18$, Rent $= 15$, Logistics $= 12$, Misc $= 10$.

Step 2 — Identify the top two:

$$\text{Largest} = \text{Salaries } 25\%, \qquad \text{Second} = \text{Marketing } 20\%.$$

Why other options are wrong:

- Option A: Salaries is the largest, not the second.
- Option B: Inventory (18%) is third.
- Option D: Rent (15%) is fourth.

Final Answer: Marketing (20%) is the second highest $\Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q12

Q13.

Solution

Concept — Difference of Two Shares: Convert the percentage gap into a value using the total.

Step 1 — Find the gap in percentage:

$$25\% - 15\% = 10\%.$$

Step 2 — Apply the gap to Rs. 720 crore:

$$\frac{10}{100} \times 720.$$

Step 3 — Compute:

$$0.10 \times 720 = 72.$$

Why other options are wrong:

- Option B: 60 uses an 8.33% gap.
- Option C: 90 uses a 12.5% gap.
- Option D: 108 uses the full 15% Rent share.

Final Answer: Salaries exceed Rent by 10% of $720 = 72$ Rs. crore $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Percentage to Angle: A full circle is $360°$, so a slice angle $=$ slice percent $\times 360°$.

Step 1 — Read the Logistics share:

$$\text{Logistics} = 12\%.$$

Step 2 — Multiply by $360°$:

$$\frac{12}{100} \times 360.$$

Step 3 — Compute:

$$0.12 \times 360 = 43.2°.$$

Why other options are wrong:

- Option A: $36°$ is the Misc (10%) angle.
- Option C: $48°$ uses a 13.33% share.
- Option D: $40°$ uses an 11.1% share.

Final Answer: Logistics angle $= 12\%$ of $360° = 43.2° \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q14

Q15.

Solution

Concept — Series Sum: Add the footfall value read at each of the six points.

Step 1 — List the monthly values:

$$20,\ 25,\ 30,\ 27,\ 36,\ 42.$$

Step 2 — Add in convenient pairs:

$$20 + 30 = 50, \qquad 25 + 27 = 52, \qquad 36 + 42 = 78.$$

Step 3 — Combine the partial sums:

$$50 + 52 + 78 = 180.$$

Why other options are wrong:

- Option A: 170 drops 10 from the total.
- Option B: 175 undercounts.
- Option D: 185 adds an extra 5.

Final Answer: Total footfall $= 180$ thousand $\Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Month-on-Month Change: Subtract each month's value from the previous month and find the largest positive jump.

Step 1 — Compute each change:

$$\text{Feb} : 25 - 20 = +5, \quad \text{Mar} : 30 - 25 = +5, \quad \text{Apr} : 27 - 30 = -3.$$

Step 2 — Continue for the last two months:

$$\text{May} : 36 - 27 = +9, \qquad \text{Jun} : 42 - 36 = +6.$$

Step 3 — Pick the largest rise:

$$+9 \text{ in May is the highest.}$$

Why other options are wrong:

- Option A: February rose only 5.
- Option B: June rose 6.
- Option C: March rose 5.

Final Answer: The largest rise $(+9)$ occurs in May $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q16

Q17.

Solution

Concept — Percentage Drop: Percentage drop $= \dfrac{\text{fall}}{\text{original}} \times 100$, where the original is the earlier value.

Step 1 — Read March and April:

$$\text{March} = 30, \qquad \text{April} = 27.$$

Step 2 — Find the fall:

$$30 - 27 = 3.$$

Step 3 — Divide by March and multiply by 100:

$$\frac{3}{30} \times 100 = 10\%.$$

Why other options are wrong:

- Option B: 6% divides by 50 instead of 30.
- Option C: 12% overstates the fall.
- Option D: 8% has no valid basis.

Final Answer: Drop $= \frac{3}{30} \times 100 = 10\% \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q17

Q18.

Solution

Concept — Average of a Series: Average $= \dfrac{\text{total}}{\text{number of months}}$.

Step 1 — Use the total from Q15:

$$\text{Total} = 180.$$

Step 2 — Divide by the 6 months:

$$\frac{180}{6} = 30.$$

Why other options are wrong:

- Option A: 28 divides a smaller total.
- Option C: 32 divides a larger total.
- Option D: 29 rounds incorrectly.

Final Answer: Average footfall $= \frac{180}{6} = 30$ thousand $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q18

Q19.

Solution

Concept — Percentage of a Whole: The women are the part of the workforce left after removing the men's share.

Step 1 — Women are $100\% - 60\% = 40\%$ of the workers:

$$\text{Women} = 40\% \text{ of } 1200.$$

Step 2 — Compute the value:

$$\frac{40}{100} \times 1200 = 480.$$

Why other options are wrong:

- Option A: 720 is the number of men (60%).
- Option C: 540 is the number of men in stores.
- Option D: 600 is half the workforce, not 40%.

Final Answer: Women $= 40\%$ of $1200 = 480 \Rightarrow \boxed{B}$

Answer: (B) Go Back to Q19

Q20.

Solution

Concept — Successive Percentages: First find the men, then the share of men who work in stores.

Step 1 — Number of men:

$$60\% \text{ of } 1200 = 720.$$

Step 2 — Men in stores are the $100\% - 25\% = 75\%$ not in the warehouse:

$$75\% \text{ of } 720.$$

Step 3 — Compute:

$$\frac{75}{100} \times 720 = 540.$$

Why other options are wrong:

- Option B: 180 is the men in the warehouse (25%).
- Option C: 288 is the women in stores.
- Option D: 720 is all the men, not just those in stores.

Final Answer: Men in stores $= 75\%$ of $720 = 540 \Rightarrow \boxed{A}$

Answer: (A) Go Back to Q20

Q21.

Solution

Concept — Combining Two Groups: Add the men in the warehouse and the women in the warehouse.

Step 1 — Men in the warehouse:

$$25\% \text{ of } 720 = 180.$$

Step 2 — Women in the warehouse:

$$40\% \text{ of } 480 = 192.$$

Step 3 — Add the two:

$$180 + 192 = 372.$$

Why other options are wrong:

- Option A: 360 counts only twice the men's figure.
- Option B: 400 rounds both figures up.
- Option D: 468 uses the wrong women's share.

Final Answer: Warehouse workers $= 180 + 192 = 372 \Rightarrow$ C

Answer: (C) Go Back to Q21

Q22.

Solution

Concept — Ratio of Two Counts: Form the ratio of the two warehouse figures and reduce it.

Step 1 — Recall the two counts:

$$\text{Men in warehouse} = 180, \qquad \text{Women in warehouse} = 192.$$

Step 2 — Form the ratio:

$$180 : 192.$$

Step 3 — Divide both parts by 12:

$$180 : 192 = 15 : 16.$$

Why other options are wrong:

- Option A: $16 : 15$ inverts the ratio.
- Option B: $5 : 6$ does not reduce from $180 : 192$.
- Option D: $3 : 4$ misreads the counts.

Final Answer: Ratio $= 180 : 192 = 15 : 16 \Rightarrow$ C

Answer: (C) Go Back to Q22

Q23.

Solution

Concept — Data Sufficiency: A statement is sufficient if it fixes a single value of x.

Step 1 — Test Statement I:

$$3x - 6 = 9 \Rightarrow 3x = 15 \Rightarrow x = 5.$$

This gives one value, so I alone is sufficient.

Step 2 — Test Statement II:

$$x > 2 \text{ allows } 3, 4, 5, \ldots \text{ (many values)}.$$

So II alone is not sufficient.

Step 3 — Conclusion:

$$\text{I alone works, II alone does not} \Rightarrow \text{answer (A)}.$$

Final Answer: Statement I alone is sufficient $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q23

Q24.

Solution

Concept — Divisibility and Sufficiency: Check whether each statement forces N to be even.

Step 1 — Test Statement I:

$$N \text{ divisible by } 3\text{: e.g. } 9 \text{ (odd) or } 6 \text{ (even)}.$$

So I alone does not decide parity.

Step 2 — Test Statement II:

$$N \text{ divisible by } 4 \Rightarrow N \text{ is a multiple of } 4, \text{ hence even}.$$

So II alone is sufficient.

Step 3 — Conclusion:

$$\text{Only II settles it} \Rightarrow \text{answer (B)}.$$

Final Answer: Statement II alone is sufficient $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q24

Q25.

Solution

Concept — Combining Statements: The total cost needs both unit prices; check if either alone can give it.

Step 1 — Test Statement I:

$$\text{Pen} = 10 \text{ only; pencil price unknown} \Rightarrow \text{not sufficient}.$$

Step 2 — Test Statement II:

$$\text{Pencil} = 4 \text{ only; pen price unknown} \Rightarrow \text{not sufficient}.$$

Step 3 — Combine I and II:

$$5 \times 10 + 3 \times 4 = 50 + 12 = 62.$$

Together they give a unique total.

Step 4 — Conclusion:

$$\text{Both needed, neither alone} \Rightarrow \text{answer (C)}.$$

Final Answer: Both statements together are needed $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q25

Q26.

Solution

Concept — Insufficient Data: A unique value is needed; a range of possibilities means insufficiency.

Step 1 — Test Statement I:

$$x \text{ is a positive integer: } 1, 2, 3, \ldots \text{ (infinitely many).}$$

Step 2 — Test Statement II:

$$x < 10: \text{ still many positive integers } 1, \ldots, 9.$$

Step 3 — Combine I and II:

$$x \in \{1, 2, 3, 4, 5, 6, 7, 8, 9\} \text{ — still not unique.}$$

Step 4 — Conclusion:

$$\text{Even together, no single value} \Rightarrow \text{answer (D).}$$

Final Answer: Even both statements together are not sufficient $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q26

Q27.

Solution

Concept — Fixing a Measurement: The perimeter of a square is fixed once the side is known.

Step 1 — Test Statement I:

$$\text{Area} > 20 \text{ cm}^2 \Rightarrow \text{side} > \sqrt{20}, \text{ a range, not a value.}$$

So I alone is not sufficient.

Step 2 — Test Statement II:

$$\text{Side} = 6 \Rightarrow \text{Perimeter} = 4 \times 6 = 24 \text{ cm.}$$

So II alone is sufficient.

Step 3 — Conclusion:

$$\text{Only II fixes the perimeter} \Rightarrow \text{answer (B)}.$$

Final Answer: Statement II alone is sufficient $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q27

Q28.

Solution

Concept — Cost Price from Profit: If the selling price and profit percent are both known, the cost price is fixed.

Step 1 — Test Statement I:

$$\text{SP} = 120 \text{ at } 20\% \text{ profit} \Rightarrow \text{CP} = \frac{120}{1.20} = 100.$$

So I alone is sufficient.

Step 2 — Test Statement II:

$$\text{Profit} = \text{Rs. } 20 \text{ only; no SP or percent} \Rightarrow \text{CP unknown}.$$

So II alone is not sufficient.

Step 3 — Conclusion:

$$\text{Only I fixes the cost price} \Rightarrow \text{answer (A)}.$$

Final Answer: Statement I alone is sufficient $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q28

Q29.

Solution

Concept — Ratio Needs a Total: A ratio gives the share of girls only when the class total is also known.

Step 1 — Test Statement I:

$$\text{Total} = 40 \text{ only; boy–girl split unknown} \Rightarrow \text{not sufficient}.$$

Step 2 — Test Statement II:

$$\text{Boys} : \text{Girls} = 3 : 2 \text{ only; total unknown} \Rightarrow \text{not sufficient.}$$

Step 3 — Combine I and II:

$$\text{Girls} = \frac{2}{3+2} \times 40 = \frac{2}{5} \times 40 = 16.$$

Together they give a unique count.

Step 4 — Conclusion:

$$\text{Both needed, neither alone} \Rightarrow \text{answer (C).}$$

Final Answer: Both statements together are needed $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q29

Q30.

Solution

Concept — Multiple Solutions: If the two conditions allow more than one number, the data is not sufficient.

Step 1 — Test Statement I:

$$\text{Digit sum} = 8 : \text{ many numbers } (17, 26, 35, \ldots).$$

Step 2 — Test Statement II:

$$\text{Digit difference} = 4 : \text{ many numbers } (15, 26, 37, \ldots).$$

Step 3 — Combine I and II:

$$\text{Digits with sum } 8 \text{ and difference } 4 \text{ are } \{6, 2\}.$$

The number could be **62** or **26**, so it is still not unique.

Step 4 — Conclusion:

$$\text{Even together, two possible numbers} \Rightarrow \text{answer (D).}$$

Final Answer: Even both statements together are not sufficient $\Rightarrow$ $\boxed{D}$

Answer: (D) Go Back to Q30

Answer Key

IBSAT Data Adequacy & Data Interpretation – Sample Paper 1									
Q	**Ans**	**Q**	**Ans**	**Q**	**Ans**	**Q**	**Ans**	**Q**	**Ans**
1	B	2	C	3	C	4	A	5	C
6	B	7	C	8	D	9	A	10	B
11	B	12	C	13	A	14	B	15	C
16	D	17	A	18	B	19	B	20	A
21	C	22	C	23	A	24	B	25	C
26	D	27	B	28	A	29	C	30	D