

CLAT QUANTITATIVE TECHNIQUES

Ratio & Proportions

20-Question Practice Module

EXAM-STYLE

4 quantitative sets • 5 MCQs each

FOCUS

Ratios • proportions • percentages

Passage 1 — Legal Aid Workshop

RATIO • PROPORTION • APPLICATION

A district legal-aid clinic expects **360 participants**. The ratio of first-time to returning participants is **5:4**. Among first-time participants, the morning-to-afternoon ratio is **3:2**. Among returning participants, **75%** attend the morning session. Every morning participant receives one information booklet; every afternoon participant receives two.

1

How many first-time participants attend the morning session?

- A. 100
- B. 120
- C. 150
- D. 200

✓ **Correct Answer: B**

Step-by-step solution: $360 \div 9 = 40$ per ratio part. First-time = $5 \times 40 = 200$. Morning = $\frac{3}{5}$ of $200 = 120$. A is half the first-time group; C uses the wrong share; D is the entire first-time group.

2

How many returning participants attend the afternoon session?

- A. 40
- B. 60
- C. 80
- D. 90

✓ **Correct Answer: A**

Step-by-step solution: Returning = $4 \times 40 = 160$. Morning = 75% of $160 = 120$. Afternoon = $160 - 120 = 40$. B, C and D exceed the actual 25% afternoon share.

3

How many booklets are required in total?

- A. 480
- B. 500
- C. 520
- D. 560

✓ **Correct Answer: A**

Step-by-step solution: First-time morning/afternoon = $120/80$. Returning morning/afternoon = $120/40$. Morning total = 240; afternoon total = 120. Required = $240 \times 1 + 120 \times 2 = 480$. The other options overestimate the allocation.

4

If total participation rises by 20% with all ratios unchanged, how many first-time participants will there be?

- A. 216
- B. 224
- C. 240
- D. 250

✓ **Correct Answer: C**

Step-by-step solution: New total = $360 \times 1.20 = 432$. First-time share = $5/9$. So $432 \times 5/9 = 240$. The other values do not preserve the 5:4 ratio.

5

If 500 booklets are available, how many remain after the original distribution?

- A. 0
- B. 20
- C. 40
- D. 60

✓ **Correct Answer: B**

Step-by-step solution: Original requirement is 480 booklets. Therefore $500 - 480 = 20$ remain. The other options result from miscounting the two-booklet afternoon allocation.

Passage 2 — Law School Library Drive

RATIO • PROPORTION • APPLICATION

A law-school library receives case-law, constitutional-studies and general-legal-studies books in the ratio **4:3:5**. In Week 1, the total is **720 books**. In Week 2, constitutional-studies donations rise by **20%**, while the other categories remain unchanged. In a later comparison, the librarian continues to use the original ratio whenever a fresh total is explicitly stated.

6

How many constitutional-studies books were donated in Week 1?

- A. 160
- B. 180
- C. 200
- D. 240

✓ **Correct Answer: B**

Step-by-step solution: Total parts = 12; one part = $720/12 = 60$. Constitutional studies = $3 \times 60 = 180$. A, C and D correspond to different ratio shares.

7

How many constitutional-studies books were donated in Week 2?

- A. 204
- B. 216
- C. 224
- D. 240

✓ **Correct Answer: B**

Step-by-step solution: Week 1 quantity = 180. Increase = 20% of 180 = 36. Week 2 = $180 + 36 = 216$. The other options represent incorrect percentage changes.

8

If Week 3 case-law donations are $\frac{3}{2}$ of Week 2 case-law donations, how many are donated in Week 3?

- A. 300
- B. 320
- C. 340
- D. 360

✓ **Correct Answer: D**

Step-by-step solution: Case-law Week 1 = $4 \times 60 = 240$ and remains unchanged in Week 2. Week 3 = $240 \times \frac{3}{2} = 360$. The other choices are below the required 1.5-times quantity.

9

What is the ratio of Week 2 constitutional-studies donations to Week 1 general-legal-studies donations?

- A. 9:25
- B. 18:25
- C. 3:5
- D. 4:5

✓ **Correct Answer: B**

Step-by-step solution: Week 2 constitutional = 216. Week 1 general legal = $5 \times 60 = 300$. Ratio 216:300 simplifies by 12 to **18:25**. C ignores the 20% increase.

10

If a fresh donation total is 900 books and the original 4:3:5 ratio is restored, how many are general-legal-studies books?

- A. 300
- B. 350
- C. 375
- D. 450

✓ **Correct Answer: C**

Step-by-step solution: General legal share = $5/12$. Thus $900 \times 5/12 = \mathbf{375}$. The other choices correspond to incorrect ratio shares.

Passage 3 — Moot Court Competition

RATIO • PROPORTION • APPLICATION

A moot-court competition has **480 students** from North, South and West in the ratio **5:7:4**. Practice rooms are allocated according to student numbers. Each room can hold **20 students**. After registration, 10 South students withdraw and 6 West students join. Updated room requirements are calculated from the revised group sizes.

11

How many students initially registered from the South?

- A. 180
- B. 200
- C. 210
- D. 240

✓ **Correct Answer: C**

Step-by-step solution: Total parts = 16; one part = $480/16 = 30$. South = $7 \times 30 = 210$. A and D use different ratio shares; B is not a share of the stated ratio.

12

How many South students remain after the withdrawals?

- A. 190
- B. 200
- C. 210
- D. 220

✓ **Correct Answer: B**

Step-by-step solution: Initial South = 210. Ten withdraw, so $210 - 10 = 200$. C ignores the withdrawal; A and D change the count by the wrong amount.

13

How many West students are there after the late registrations?

- A. 116
- B. 120
- C. 126
- D. 130

✓ **Correct Answer: C**

Step-by-step solution: Initial West = $4 \times 30 = 120$. Six join, giving $120 + 6 = 126$. B is the old figure; A and D apply the wrong change.

14**How many rooms are required for the updated South group?**

- A. 9
- B. 10
- C. 11
- D. 12

✓ **Correct Answer: B**

Step-by-step solution: Updated South = 200. At 20 students per room, $200/20 = 10$ **rooms**. Nine hold only 180; 11 and 12 are more than the minimum required.

15**By what percentage has the West group increased from its original size?**

- A. 4%
- B. 5%
- C. 6%
- D. 8%

✓ **Correct Answer: B**

Step-by-step solution: Increase = $126 - 120 = 6$. Percentage increase = $6/120 \times 100 = 5\%$. The other percentages use an incorrect base or increase.

Passage 4 — Legal Awareness Survey

RATIO • PROPORTION • APPLICATION

A legal-awareness survey has **1,200 respondents**. School students, college students and working adults are in the ratio **3:5:2**. Correct-response rates are **40%**, **60%** and **50%**, respectively, for identifying a specified constitutional right. A second survey has **1,500 respondents** with the same group composition and the same success rates.

16

How many college students are in the first survey?

- A. 360
- B. 480
- C. 600
- D. 720

✓ **Correct Answer: C**

Step-by-step solution: Total parts = 10; one part = 120. College students = $5 \times 120 = 600$. A is the school group; 240 would be the working-adult group.

17

How many school students correctly identify the right?

- A. 120
- B. 144
- C. 160
- D. 180

✓ **Correct Answer: B**

Step-by-step solution: School students = $3 \times 120 = 360$. Correct = 40% of 360 = **144**. The other figures use incorrect percentages.

18

How many respondents correctly identify the right in total?

- A. 564
- B. 600
- C. 624
- D. 660

✓ **Correct Answer: C**

Step-by-step solution: School: $360 \times 40\% = 144$. College: $600 \times 60\% = 360$. Working adults: $240 \times 50\% = 120$. Total = $144 + 360 + 120 = 624$. The alternatives misapply at least one group rate.

19**How many working adults are expected in the second survey?**

A. 250

B. 300

C. 350

D. 375

✓ Correct Answer: B

Step-by-step solution: Working adults are $\frac{2}{10}$ of 1,500. Thus $1,500 \times \frac{2}{10} = 300$. The other choices do not equal 20% of the sample.

20**How many respondents are expected to correctly identify the right in the second survey?**

A. 750

B. 780

C. 800

D. 825

✓ Correct Answer: B

Step-by-step solution: School = 450, college = 750, working adults = 300. Correct: $450 \times 40\% = 180$; $750 \times 60\% = 450$; $300 \times 50\% = 150$. Total = **780**. The other options overestimate the weighted result.

Answer Key at a Glance

Set	Q1	Q2	Q3	Q4	Q5
Set 1	B	A	A	C	B
Set 2	B	B	D	B	C
Set 3	C	B	C	B	B
Set 4	C	B	C	B	B

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