

SNAP Quantitative, Data Interpretation and Data Sufficiency

Sample Paper – 3

Duration: 20 Minutes

Maximum Marks: 20

Instructions

- This paper contains **20** Multiple Choice Questions (Single Correct Answer), modelled on the Quantitative, Data Interpretation and Data Sufficiency section of **SNAP** (Symbiosis National Aptitude Test).
- Each correct answer carries **+1 mark**. **0.25 marks** are deducted for every wrong answer. Unattempted questions carry no penalty.
- Only **one** option is correct. Choose the most appropriate answer.
- SNAP is a computer-based test with no sectional time limit; attempt this practice paper in one timed sitting of about **20 minutes**.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Part A: Arithmetic

- Q1.** The price of an article is first increased by 20% and then decreased by 20%. If the original price was Rs. 500, what is the final price?
- (A) Rs. 500
(B) Rs. 490
(C) Rs. 480
(D) Rs. 520
- Q2.** Two numbers are in the ratio 5 : 7. If their sum is 96, what is the larger number?
- (A) 40



- (B) 56
- (C) 48
- (D) 60

Q3. In an examination a student needs 40% marks to pass. He scores 180 marks and fails by 20 marks. What are the maximum marks?

- (A) 450
- (B) 480
- (C) 500
- (D) 520

Q4. A sum of money doubles itself in 8 years at simple interest. In how many years will it become three times itself at the same rate?

- (A) 12
- (B) 16
- (C) 20
- (D) 24

Q5. The average age of three boys is 15 years. If their ages are in the ratio 3 : 5 : 7, what is the age of the youngest boy?

- (A) 9 years
- (B) 12 years
- (C) 15 years
- (D) 21 years

Q6. A man covers a distance of 300 km in 5 hours. What is his average speed in km/h?

- (A) 60
- (B) 65
- (C) 55



(D) 48

Part B: Algebra and Number System

Q7. If $a + b = 7$ and $ab = 12$, what is the value of $a^2 + b^2$?

(A) 49

(B) 1

(C) 25

(D) 37

Q8. The sum of two consecutive odd numbers is 56. What is the larger of the two numbers?

(A) 27

(B) 29

(C) 31

(D) 25

Q9. Solve for x : $5x + 3 = 2x + 18$.

(A) 5

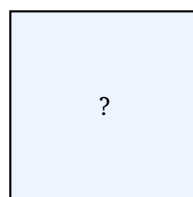
(B) 6

(C) 7

(D) 4

Part C: Geometry and Mensuration

Q10. The perimeter of the square shown below is 36 cm. Find its area.

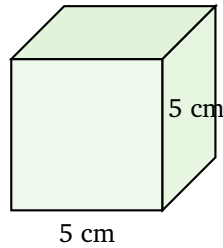


side



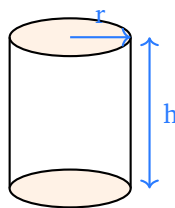
- (A) 81 sq. cm
- (B) 72 sq. cm
- (C) 64 sq. cm
- (D) 100 sq. cm

Q11. Find the volume of a cube whose side is 5 cm.



- (A) 150 cu. cm
- (B) 100 cu. cm
- (C) 25 cu. cm
- (D) 125 cu. cm

Q12. Find the volume of a cylinder of radius 7 cm and height 10 cm. (Take $\pi = \frac{22}{7}$.)

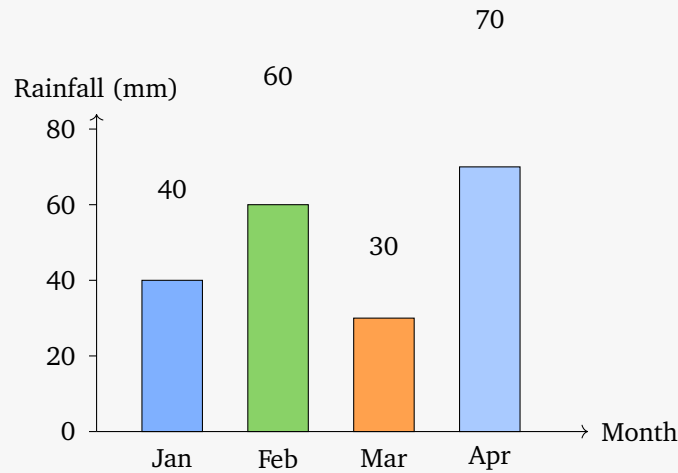


- (A) 2200 cu. cm
- (B) 770 cu. cm
- (C) 1100 cu. cm
- (D) 1540 cu. cm

Part D: Data Interpretation



Directions (Q13–Q16): The bar chart below shows the monthly rainfall (in mm) recorded in a city over four consecutive months. Study it and answer the questions that follow.



Q13. In which month was the rainfall the highest?

- (A) January
- (B) February
- (C) April
- (D) March

Q14. What is the total rainfall (in mm) recorded over the four months?

- (A) 180
- (B) 190
- (C) 210
- (D) 200

Q15. The rainfall in January is what percentage of the total rainfall over the four months?

- (A) 15%
- (B) 25%
- (C) 30%
- (D) 20%



Q16. What is the average monthly rainfall (in mm) over the four months?

- (A) 50
- (B) 55
- (C) 45
- (D) 60

Part E: Data Sufficiency

Directions (Q17–Q20): Each question is followed by two statements, I and II. Decide whether 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;
- (D) if either statement alone is sufficient.

Q17. What is the two-digit number?

- I. The sum of its digits is 9.
- II. The tens digit is twice the units digit.

- (A) Statement I alone is sufficient
- (B) Statement II alone is sufficient
- (C) Both statements together are needed
- (D) Either statement alone is sufficient

Q18. What is the monthly salary of an employee?

- I. His total annual salary is Rs. 6,00,000.
- II. His salary for any six months adds up to Rs. 3,00,000.

- (A) Statement I alone is sufficient
- (B) Statement II alone is sufficient
- (C) Both statements together are needed
- (D) Either statement alone is sufficient



Q19. How many students passed a test?

- I. 60% of the students who appeared passed the test.
- II. Exactly 18 students passed the test.

- (A) Statement I alone is sufficient
- (B) Statement II alone is sufficient
- (C) Both statements together are needed
- (D) Either statement alone is sufficient

Q20. What is the perimeter of a rectangle?

- I. The area of the rectangle is 60 sq. cm.
- II. The length is 12 cm and the breadth is 5 cm.

- (A) Statement I alone is sufficient
- (B) Statement II alone is sufficient
- (C) Both statements together are needed
- (D) Either statement alone is sufficient



Detailed Solutions**Q1.****Solution**

Concept — Successive percentage change: Apply each change one after the other on the running amount, not on the original amount twice.

Step 1: Start with the original price of Rs. 500.

Step 2: Increase of 20% = $0.20 \times 500 = \text{Rs. } 100$, so the price becomes $500 + 100 = \text{Rs. } 600$.

Step 3: Decrease of 20% is now taken on Rs. 600: $0.20 \times 600 = \text{Rs. } 120$.

Step 4: Final price = $600 - 120 = \text{Rs. } 480$.

Why other options are wrong:

- Option A: Rs. 500 wrongly assumes the two changes cancel out.
- Option B: Rs. 490 comes from a wrong intermediate figure.
- Option D: Rs. 520 adds both changes instead of applying them in turn.

Final Answer: The final price is Rs. 480 $\Rightarrow$ **C**

Answer: (C) [Go Back to Q1](#)

Q2.**Solution**

Concept — Ratio and sum: Add the ratio parts, find the value of one part, then scale up.

Step 1: The ratio is 5 : 7, so the total number of parts is $5 + 7 = 12$.

Step 2: One part = $\frac{96}{12} = 8$.

Step 3: The larger number has 7 parts = $7 \times 8 = 56$.

Why other options are wrong:

- Option A: 40 is the smaller number (5 parts).
- Option C: 48 is half the sum, not a ratio share.
- Option D: 60 does not match either part.

Final Answer: The larger number is 56 $\Rightarrow$ **B**



Answer: (B) [Go Back to Q2](#)

Q3.

Solution

Concept — Pass mark and maximum marks: The pass mark equals the student's score plus the shortfall, and it is a fixed percentage of the maximum marks.

Step 1: The student scored 180 and fell short by 20, so the pass mark = $180 + 20 = 200$.

Step 2: The pass mark is 40% of the maximum marks, so $0.40 \times \text{Max} = 200$.

Step 3: Maximum marks = $\frac{200}{0.40} = 500$.

Why other options are wrong:

- Option A: 450 gives a pass mark of 180, ignoring the shortfall.
- Option B: 480 gives a pass mark of 192, not 200.
- Option D: 520 gives a pass mark of 208, not 200.

Final Answer: The maximum marks are 500 $\Rightarrow$ **C**

Answer: (C) [Go Back to Q3](#)

Q4.

Solution

Concept — Simple interest growth: Under simple interest the interest earned is proportional to time, so equal amounts of interest take equal amounts of time.

Step 1: When the sum doubles, the interest earned equals the principal itself (an extra $1P$), and this takes 8 years.

Step 2: To become three times, the interest earned must equal twice the principal (an extra $2P$).

Step 3: Since $1P$ of interest takes 8 years, $2P$ of interest takes $2 \times 8 = 16$ years.

Why other options are wrong:

- Option A: 12 years assumes the wrong multiple of time.
- Option C: 20 years overstates the required time.
- Option D: 24 years would make the sum four times, not three.

Final Answer: The sum triples in 16 years $\Rightarrow$ **B**



Answer: (B) [Go Back to Q4](#)

Q5.

Solution

Concept — Average and ratio: Use the average to find the total, then split the total by the ratio.

Step 1: Sum of the three ages = $15 \times 3 = 45$ years.

Step 2: The ratio is 3 : 5 : 7, so the total number of parts is $3 + 5 + 7 = 15$.

Step 3: One part = $\frac{45}{15} = 3$ years.

Step 4: The youngest boy has 3 parts = $3 \times 3 = 9$ years.

Why other options are wrong:

- Option B: 12 years does not correspond to any ratio share.
- Option C: 15 years is the average age, not the youngest.
- Option D: 21 years is the oldest boy (7 parts).

Final Answer: The youngest boy is 9 years old $\Rightarrow$ **A**

Answer: (A) [Go Back to Q5](#)

Q6.

Solution

Concept — Average speed: $\text{Speed} = \frac{\text{distance}}{\text{time}}$.

Step 1: Distance = 300 km and time = 5 hours.

Step 2: Speed = $\frac{300}{5} = 60$ km/h.

Why other options are wrong:

- Option B: 65 km/h does not divide evenly into the given figures.
- Option C: 55 km/h understates the speed.
- Option D: 48 km/h would cover only 240 km in 5 hours.

Final Answer: The average speed is 60 km/h $\Rightarrow$ **A**

Answer: (A) [Go Back to Q6](#)



Q7.

Solution**Concept — Algebraic identity:** $a^2 + b^2 = (a + b)^2 - 2ab$.**Step 1:** We are given $a + b = 7$ and $ab = 12$.**Step 2:** $(a + b)^2 = 7^2 = 49$.**Step 3:** $2ab = 2 \times 12 = 24$.**Step 4:** $a^2 + b^2 = 49 - 24 = 25$.**Why other options are wrong:**

- Option A: 49 forgets to subtract $2ab$.
- Option B: 1 is the value of $(a - b)^2 = 49 - 48$.
- Option D: 37 subtracts ab once instead of $2ab$.

Final Answer: The value is 25 $\Rightarrow$ CAnswer: (C) [Go Back to Q7](#)

Q8.

Solution**Concept — Consecutive odd numbers:** Two consecutive odd numbers differ by 2; write them as n and $n + 2$.**Step 1:** Let the numbers be n and $n + 2$, so $n + (n + 2) = 56$.**Step 2:** $2n + 2 = 56$, so $2n = 54$ and $n = 27$.**Step 3:** The numbers are 27 and 29; the larger is $n + 2 = 29$.**Why other options are wrong:**

- Option A: 27 is the smaller number.
- Option C: 31 pairs with 25 to give 56 but 25 and 31 are not consecutive odd numbers.
- Option D: 25 is not part of the correct pair.

Final Answer: The larger number is 29 $\Rightarrow$ BAnswer: (B) [Go Back to Q8](#)

Q9.

Solution

Concept — Linear equation: Collect the variable terms on one side and the constants on the other.

Step 1: Start with $5x + 3 = 2x + 18$.

Step 2: Subtract $2x$ from both sides: $3x + 3 = 18$.

Step 3: Subtract 3 from both sides: $3x = 15$.

Step 4: Divide by 3: $x = 5$.

Why other options are wrong:

- Option B: 6 gives $33 \neq 30$.
- Option C: 7 gives $38 \neq 32$.
- Option D: 4 gives $23 \neq 26$.

Final Answer: $x = 5 \Rightarrow$ A

Answer: (A) [Go Back to Q9](#)

Q10.

Solution

Concept — Square: Perimeter = $4 \times \text{side}$, and area = side^2 .

Step 1: Side = $\frac{\text{perimeter}}{4} = \frac{36}{4} = 9$ cm.

Step 2: Area = $9^2 = 81$ sq. cm.

Why other options are wrong:

- Option B: 72 sq. cm does not follow from a side of 9 cm.
- Option C: 64 sq. cm corresponds to a side of 8 cm.
- Option D: 100 sq. cm corresponds to a side of 10 cm.

Final Answer: The area is 81 sq. cm $\Rightarrow$ A

Answer: (A) [Go Back to Q10](#)



Q11.

Solution**Concept — Volume of a cube:** $\text{Volume} = \text{side}^3$.**Step 1:** The side of the cube is 5 cm.**Step 2:** $\text{Volume} = 5^3 = 5 \times 5 \times 5 = 125 \text{ cu. cm.}$ **Why other options are wrong:**

- Option A: 150 cu. cm is 6×25 , using the surface-area idea by mistake.
- Option B: 100 cu. cm does not equal 5^3 .
- Option C: 25 cu. cm is 5^2 , the area of one face, not the volume.

Final Answer: The volume is 125 cu. cm $\Rightarrow$ DAnswer: (D) [Go Back to Q11](#)

Q12.

Solution**Concept — Volume of a cylinder:** $\text{Volume} = \pi r^2 h$.**Step 1:** Here $r = 7 \text{ cm}$, $h = 10 \text{ cm}$ and $\pi = \frac{22}{7}$.**Step 2:** $r^2 = 7 \times 7 = 49$.**Step 3:** $\text{Volume} = \frac{22}{7} \times 49 \times 10 = 22 \times 7 \times 10 = 1540 \text{ cu. cm.}$ **Why other options are wrong:**

- Option A: 2200 cu. cm uses a wrong radius.
- Option B: 770 cu. cm is half of the correct value.
- Option C: 1100 cu. cm does not match the formula.

Final Answer: The volume is 1540 cu. cm $\Rightarrow$ DAnswer: (D) [Go Back to Q12](#)

Q13.

Solution

Concept — Reading a bar chart: The tallest bar shows the largest value.

Step 1: The values are Jan = 40, Feb = 60, Mar = 30, Apr = 70 (mm).

Step 2: The largest value, 70 mm, belongs to April.

Why other options are wrong:

- Option A: January had only 40 mm.
- Option B: February had 60 mm, not the highest.
- Option D: March had the least, 30 mm.

Final Answer: Rainfall was highest in April $\Rightarrow$ **C**

Answer: (C) [Go Back to Q13](#)

Q14.

Solution

Concept — Total from a chart: Add the values of all the bars.

Step 1: Total = 40 + 60 + 30 + 70.

Step 2: 40 + 60 = 100; 100 + 30 = 130; 130 + 70 = 200 mm.

Why other options are wrong:

- Option A: 180 misreads one of the bars.
- Option B: 190 undercounts by 10.
- Option C: 210 overcounts by 10.

Final Answer: The total rainfall is 200 mm $\Rightarrow$ **D**

Answer: (D) [Go Back to Q14](#)

Q15.

Solution

Concept — Part as a percentage of the whole: Percentage = $\frac{\text{part}}{\text{whole}} \times 100$.

Step 1: January rainfall = 40 mm and total rainfall = 200 mm.



Step 2: Percentage = $\frac{40}{200} \times 100 = 20\%$.

Why other options are wrong:

- Option A: 15% would need January to be 30 mm.
- Option B: 25% would need January to be 50 mm.
- Option C: 30% is the share of February (60 mm), not January.

Final Answer: January is 20% of the total $\Rightarrow$ **D**

Answer: (D) [Go Back to Q15](#)

Q16.

Solution

Concept — Average: Average = $\frac{\text{total}}{\text{number of months}}$.

Step 1: Total over four months = 200 mm (from Q14).

Step 2: Average = $\frac{200}{4} = 50$ mm.

Why other options are wrong:

- Option B: 55 mm is above the true average.
- Option C: 45 mm is below the true average.
- Option D: 60 mm equals February's rainfall, not the average.

Final Answer: The average is 50 mm $\Rightarrow$ **A**

Answer: (A) [Go Back to Q16](#)

Q17.

Solution

Concept — Data sufficiency: Test each statement on its own; a unique two-digit number is needed.

Statement I: "The sum of the digits is 9" allows 18, 27, 36, 45, 54, 63, 72, 81 and 90. Many numbers fit, so I alone is not sufficient.

Statement II: "The tens digit is twice the units digit" allows 21, 42, 63 and 84. Again many numbers fit, so II alone is not sufficient.

Both together: Let the units digit be u , so the tens digit is $2u$. The digit sum is



$2u + u = 3u = 9$, giving $u = 3$ and tens digit 6. The number is 63, which is unique. A unique answer results only when both statements are used.

Final Answer: Both statements together are needed $\Rightarrow$ **C**

Answer: (C) [Go Back to Q17](#)

Q18.

Solution

Concept — Data sufficiency: If each statement alone fixes the monthly salary, either one is sufficient.

Statement I: An annual salary of Rs. 6,00,000 gives a monthly salary of $\frac{6,00,000}{12} = \text{Rs. } 50,000$ on its own, so I alone is sufficient.

Statement II: A six-month total of Rs. 3,00,000 gives a monthly salary of $\frac{3,00,000}{6} = \text{Rs. } 50,000$ on its own, so II alone is sufficient.

Conclusion: Each statement alone gives the same unique value, so either statement alone is sufficient.

Final Answer: Either statement alone is sufficient $\Rightarrow$ **D**

Answer: (D) [Go Back to Q18](#)

Q19.

Solution

Concept — Data sufficiency: A percentage alone cannot give a count without the total, but an exact count can.

Statement I: “60% of the students passed” gives no actual number, because the total number of students who appeared is unknown, so I alone is not sufficient.

Statement II: “Exactly 18 students passed” states the count directly, so II alone is sufficient.

Conclusion: Statement II alone is sufficient but Statement I alone is not.

Final Answer: Statement II alone is sufficient $\Rightarrow$ **B**

Answer: (B) [Go Back to Q19](#)



Q20.

Solution

Concept — Data sufficiency: Perimeter of a rectangle needs both the length and the breadth.

Statement I: “The area is 60 sq. cm” fixes only the product $l \times b = 60$. Many pairs such as 10×6 or 12×5 give different perimeters, so I alone is not sufficient.

Statement II: “Length is 12 cm and breadth is 5 cm” gives both dimensions, so the perimeter $= 2(12 + 5) = 34$ cm. II alone is sufficient.

Conclusion: Statement II alone is sufficient but Statement I alone is not.

Final Answer: Statement II alone is sufficient $\Rightarrow$ **B**

Answer: (B)

[Go Back to Q20](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	C	2	B	3	C	4	B	5	A
6	A	7	C	8	B	9	A	10	A
11	D	12	D	13	C	14	D	15	D
16	A	17	C	18	D	19	B	20	B

