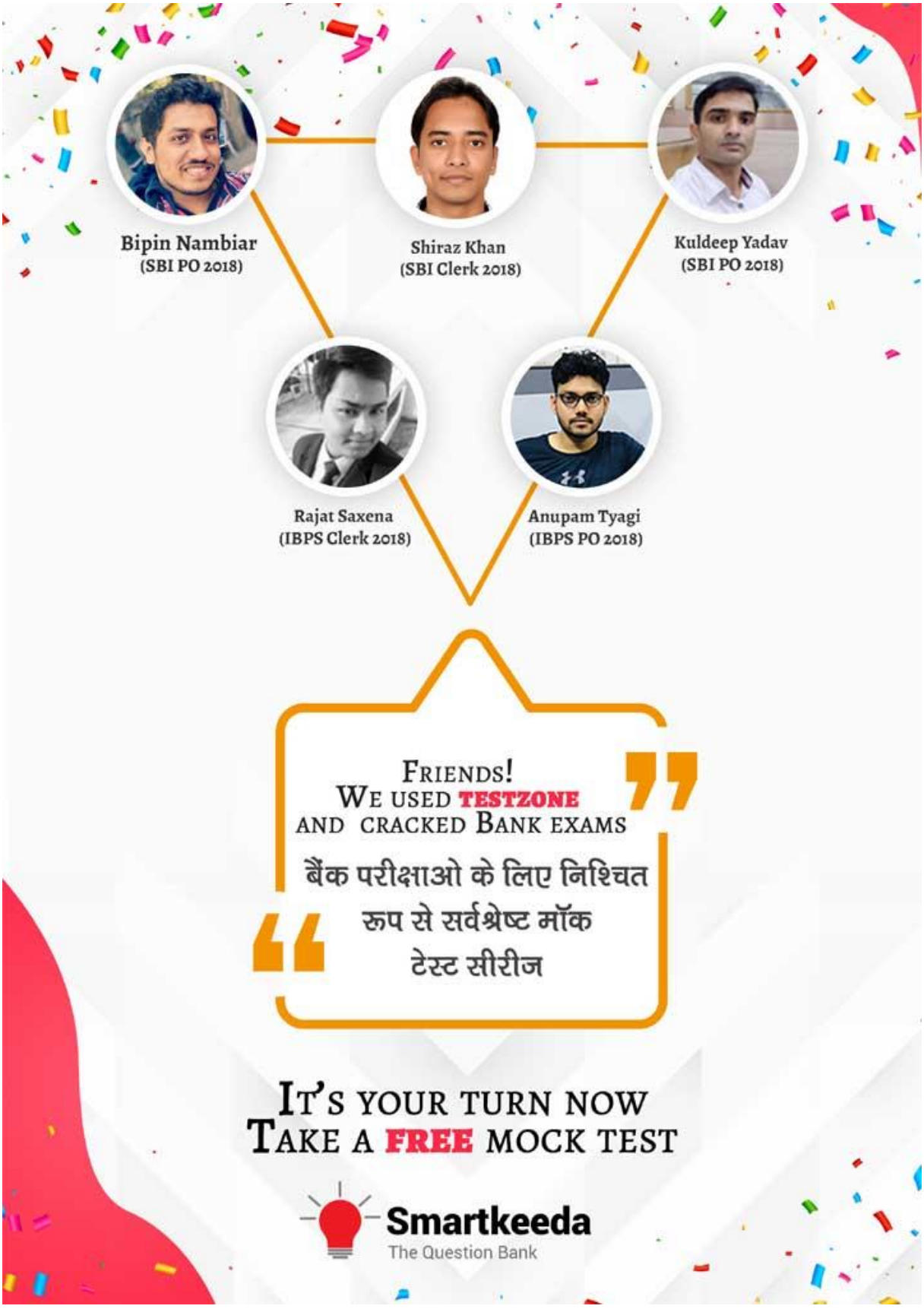
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The Question Bank

Maths Inequalities Questions for SBI Clerk Pre, IBPS Clerk Pre, LIC Assistant Pre and RRB Assistant Pre Exams.

Maths Inequalities Quiz 18

Directions: In each of the following questions, read the given statement and compare the Quantity I and Quantity II on its basis. (only quantity is to be considered)

1. **Quantity I :** In an election between two candidates, 75% of the total voters cast their votes, out of which 2% of the votes were declared invalid. A candidate got 9261 votes, which was 75% of the total valid votes. Find the total number of total voters.

Quantity II : 15800

A. Quantity : I > Quantity : II
B. Quantity : I ≥ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I
E. Quantity I = Quantity II or relation can't be established

2. **Quantity I :** Rahul is 6 years older than his wife Dinki. The present age of their son Bunty is 1/3 of Dinki's present age. If the sum of the present ages of Rahul and Bunty is 54 years, then what was Dinki's age when Bunty was born? (in years)

Quantity II : 24 years

A. Quantity : I > Quantity : II
B. Quantity : I ≥ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I
E. Quantity I = Quantity II or relation can't be established

3. **Quantity I :** Each month, Shruti out of her monthly salary pays 25% towards rent and she gives 40% of the remaining salary to her mother. She spends 40% of the remaining amount and saves the remaining in her bank account. If at the end of five months she has saved in her bank account Rs. 1,08,000, then how much did she pay towards rent per month?

Quantity II : Rs. 24000

A. Quantity : I > Quantity : II
B. Quantity : I ≥ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I
E. Quantity I = Quantity II or relation can't be established

4. **Quantity I :** The selling price of 8 ceiling fans and 6 table fans is Rs. 10000 and that of 5 ceiling fans and 8 table fans is Rs. 8800. What is the selling price of 2 table fans?(In Rs.)

Quantity II : 1500

A. Quantity : I > Quantity : II B. Quantity : I ≥ Quantity : II C. Quantity : I < Quantity : II
D,. Quantity : II ≥ Quantity : I E. Quantity I = Quantity II or relation can't be established

5. **Quantity I :** A car covers first 30 km in 25 minutes and the remaining 100 km in 75 minutes. What is the average speed of the car (in km/hr)

Quantity II : 72 km/hr

A. Quantity : I > Quantity : II B. Quantity : I ≥ Quantity : II C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I E. Quantity I = Quantity II or relation can't be established

6. **Quantity I :** In how many different ways can be letters of the word 'NATION' be arranged?

Quantity II : 365

A. Quantity : I > Quantity : II B. Quantity : I ≥ Quantity : II C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I E. Quantity I = Quantity II or relation can't be established

7. **Quantity I :** A 510m long train crosses a platform half its length in 45 seconds. What is the speed of the train?(in kmph)

Quantity II : 67.3 kmph

A. Quantity : I > Quantity : II B. Quantity : I ≥ Quantity : II C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I E. Quantity I = Quantity II or relation can't be established

8. **Quantity I :** What is the least number to be added to 1370 to make it a perfect square?

Quantity II : 72

A. Quantity : I > Quantity : II B. Quantity : I ≥ Quantity : II C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I E. Quantity I = Quantity II or relation can't be established

9. **Quantity I :** The ratio of 52% of X to 30% of Y is 12 : 5. If X is 50 more than Y, then what is the value of 2X + Y?

Quantity II : 390

A. Quantity : I > Quantity : II B. Quantity : I ≥ Quantity : II C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I E. Quantity I = Quantity II or relation can't be established

10. **Quantity I :** A jar contains 48 litres of milk and 'X' litres of water. If a new mixture containing '2X' litres of milk and '3X' litre water is added to the jar, then the final quantity of this mixture becomes 60 litres. What was the quantity of milk in the final mixture? (in litres)

Quantity II : 51 litres

A. Quantity : I > Quantity : II
B. Quantity : I ≥ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II ≥ Quantity : I
E. Quantity I = Quantity II or relation can't be established

Correct Answers:

1	2	3	4	5	6	7	8	9	10
A	E	C	C	A	C	C	A	A	A

Explanations:

1. **Quantity I :**

Let the total number of voters be 100x.

75% of 100x = 75x casted their votes

As 2% of the votes were declared invalid, so valid votes = 98% of 75x

Now, candidate got 75% of the total valid votes = 75% of 98% of 75x

So, 75% of 98% of 75x = 9261

$$100x = 9261 \left(\frac{100}{75}\right) \times \left(\frac{100}{98}\right) \times \left(\frac{100}{75}\right)$$

$$= 9261 \times \frac{4}{3} \times \frac{50}{49} \times \frac{4}{3} = 16800$$

Quantity II : 15800

Here, Quantity I > Quantity II

Hence, option A is correct.

2. **Quantity I :**

	Rahul	Dinki	Bunty
Present age =	S + 6	S	$\frac{S}{3}$

Now, $S + 6 + \frac{S}{3} = 54$

$\Rightarrow 3S + 18 + S = 54 \times 3$
$\Rightarrow 4S = 162 - 18 = 144$
$\therefore S = 36$ years

$\therefore$ Dinki's age when Bunty was born = $36 - \frac{36}{3} = 24$ years

Quantity II : 24 years

Here, Quantity I : = Quantity II

Hence, option E is correct.

3. **Quantity I :** Let the Shruti's monthly salary be Rs. 100x

She pays for rent = Rs. 25x

∴ Remaining amount = Rs. (100 – 25)x = Rs. 75x

Now, 40% of 75x = Rs. 30x she sends to her mother.

∴ Remaining salary = Rs. (75 – 300x = Rs. 45x

Again, she spends 40% of 45x = Rs. 18x

Remaining amount = Rs. (45 – 18) = Rs. 27x

Now, she saves Rs. 27x in her bank account.

So, 27x × 5 = 108000

$\therefore 25x = \frac{108000}{27x \times 5} \times 25x$ = Rs. 20000

Quantity II : Rs. 24000

Here, Quantity : I < Quantity : II

Hence, option C is correct.

4. **Quantity I :**

8C + 6T = 10000.....(i)
5C + 8T = 8800.....(ii)

Solving (i) × 4 – (ii) × 3, we get

32C + 24T = 40000
15C + 24T = 26400
– – –
17C = 13600

∴ C = Rs. 800

Putting value of C in eqn. (i) we get

T = Rs. 600

∴Price of 2 table fans = 600 × 2 = Rs. 1200

Quantity II : 1500

Hence, Quantity : I < Quantity : II

Hence, option C is correct.

5. **Quantity I :**

$$\text{Average speed} = \frac{\text{Total distance travelled}}{\text{Time taken to travel the distance}}$$

$$= \frac{100 + 30}{\frac{25 + 75}{60}} = \frac{130}{100} \times 60 = 78 \text{ km/hr}$$

Quantity II : 72 km/hr

Hence, Quantity : I > Quantity : II

Hence, option A is correct.

6. **Quantity I:**

$$\text{Number of ways} = \frac{6!}{2!} = 360$$

Quantity II: 365

Therefore, Quantity I < Quantity II.

Hence, option C is correct.

.

7. **Quantity I:**

$$\text{Speed of the train} = \frac{510 + 255}{45}$$

$$= \frac{765}{45} = 17 \text{ m/s}$$

$$= 17 \times \frac{18}{5} = 61.2 \text{ kmph}$$

Quantity II: 67.3 kmph

Therefore, Quantity I < Quantity II.

Hence, option C is correct.

8. **Quantity I:** Since $(37)^2 < 1370 < (38)^2$

Therefore the least number to be added to 1370 to make it a perfect square = $(38)^2 - 1370 = 74$

Quantity II: 72

Therefore, Quantity I > Quantity II.

Hence, option A is correct.

9. **Quantity I :**

$$\frac{52\% \text{ of } X}{30\% \text{ of } Y} = \frac{12}{5}$$

$$\Rightarrow \frac{52X}{30Y} = \frac{12}{5}$$

$$\Rightarrow \frac{X}{Y} = \frac{12 \times 30}{52 \times 5} = \frac{18}{13}$$

$\Rightarrow X : Y = 18 : 13$

Since , X is 50 more than Y.

$\Rightarrow X = Y + 50$

Putting the value of X in X : Y = 18 : 13, we get Y = 130 and X = 180

Now, $(2 \times 180 + 130) = 490$

Quantity II : 390

Here, Quantity : I > Quantity : II

Hence, option A is correct.

10. **Quantity I :**

	Milk	water
Initial mixture	48 L	x L
New mixture	2x L	3x L
Final mixture	48 + 2x	x + 3x

Now, $48 + 2x + x + 3x = 60$
$\Rightarrow 6x = 60 - 48 = 12$
$\therefore x = 2$
$\therefore$ Quantity of milk = $(48 + 2 \times 2) = 52$ litres

Quantity II : 51 litres
Here, Quantity I : > Quantity : II
Hence, option A is correct.