

# Inequalities Questions for SBI PO Pre, SBI Clerk, RBI Assistant, LIC AAO, RRB Scale I Pre, IBPS Clerk and IBPS PO Pre Exams 

## Maths Inequalities Quiz 12

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: The sum of the four-consecutive multiples of 4 is 440 . What would be the smallest number?

Quantity II: The sum of three consecutive multiples of 3 is 324 . What would be the smallest number?
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I \& Quantity: II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
2. Quantity I: Which positive number can completely divide (without remainder) $237+177$

Quantity II: What is the unit digit of 4756
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
3. Quantity I: In the year 2017, Raju, a daily worker earned total of Rs. 40150.

What was his daily income if he has not taken leave on any single day during the year?

Quantity II: In the year 2016, Raju, a daily worker earned total of Rs. 38500. What was his daily income if he has taken exactly 16 days leave during the year?
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
4. Quantity I: On May 1, 2010, the ratio of the age of A to B was 5:6. On May 1,2018 , the ratio of the age of $A$ to $B$ became $19: 22$. On Dec 1, 2018, what will be the age of $B$ ?

Quantity II: 44.5 years
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
5. Quantity I: How many different ways, can the letter of words INDIA can be arranged?

Quantity II: 120
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
6. Quantity I: The area of a rectangular filed is 8432 sq . cm . If a boy measured the length of the field, he found that it was greater than 25 cm but less than 28 cm . What was the possible value of the breadth of the field?

Quantity II: 300 cm
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
7. Quantity I: At present, the ratio of the age of $A$ and $B$ in the ratio of 3:4 respectively. After 2 years, the product of their age will become 2214 years. 5 years ago, what was the average of their age?

Quantity II: 62
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
8. Quantity I: On January 1st 2018, Ram invests Rs. 1825 in a bank under simple interest at the rate of $10 \%$ per annum. On August 15th 2018, he withdraws all his money. What will be the total interest received by him? (He received the interest of both the days i.e. of January 1st and of August 15th)

Quantity II: Rs. 115
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
9. Quantity I: A boy wants to sell a radio for $25 \%$ profit on the cost price. He marked the price of the radio Rs. 600 and gave $10 \%$ discount on the marked price and earned the desired percentage of profit. What was the cost price of the radio?

Quantity II: Rs. 440
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established
10. Quantity I: In how many different ways can the letter of words 'COGRESS' be arranged?

Quantity II: 2500
A. Quantity : I > Quantity : II
B. Quantity : I $\geq$ Quantity : II
C. Quantity : I < Quantity : II
D. Quantity : II $\geq$ Quantity : I
E. Quantity I = Quantity II or relation can't be established

## Correct answer:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | B | E | A | C | A | A | C | C | A |

## Explanation:

1. Quantity I : Let the first number of x

Then the next number should be $\mathrm{x}+4$

The third number $=x+4+4=x+8$
The fourth number $=x+4+4+4=x+12$
According to the question,
$4 x+4+8+12=440$
$4 x=416$

Therefore, the smallest number $=x=104$

Quantity II : let the first number of $x$
Then the next number should be $x+3$
The third number $=x+3+3=x+6$

According to the question,
$3 x+3+6=324$
$3 x=315$

Therefore, the smallest number $=x=105$

Therefore, Quantity : I < Quantity : II

Hence, option C is correct.
2. Quantity I : we know that, $a^{n}+b^{n}$ is completely divisible $b y(a+b)$ if $n$ is odd Therefore, $23^{7}+17^{7}$ will completely divisible by $23+17=40$

It means, $23^{7}+17^{7}$ will be completely divisible by $1,2,4,8,10,20$, and 40
Quantity II : Unit digit of $47^{56}=$ Unit digit of $7^{56}=7^{14 \times 4}$
We know that, the unit digit of $7^{4 n}=1$
Therefore, the unit digit of $7^{14 \times 4}=1$
Therefore, Quantity : I $\geq$ Quantity : II
Hence, option B is correct.
3. Quantity I : In the year 2017, the total number of days $=365$

The total money Raju earned $=40150$

Per day income $=\frac{40150}{365}=$ Rs. 110 per day
Quantity II : In the year 2016, the total number of days $=366$
The total number of days he worked $=366-16=350$ days
The total money he earned $=38500$
His daily income $=\frac{38500}{350}=110$

Therefore, Quantity : I = Quantity : II

Hence, option E is correct.
4. Quantity I: Between on May 12018 and May 1 2010, the total number of years $=8$

According to the question,
$\frac{5 x+8}{6 x+8}=\frac{19}{22}$

By solving, $x=6$

On May 1, 2010

The age of $B=6 \times 6=36$ years

On May 1, 2018, the age of B will become $36+8=44$ years

On Dec 1, 2018 the age of $B$ will become 44 years 7 months $=44.58$ years
Therefore, Quantity : I > Quantity : Il

Hence, option A is correct.
5. Quantity I:

The number of letters in INDIA = 5

The number of $\mathrm{I}=2$
The reqd. number of ways $=\frac{5!}{2!}=\frac{120}{2}=60$

Therefore, Quantity : I < Quantity : II

Hence, option C is correct.
6. Quantity I : We know that the area of a rectangular field $=$ length $\times$ breadth $=$ 8432 cm

From the question, 28 < length > 25

Therefore, the possible value of length can be any thing in between 25 and 28

The maximum possible value of length can be
$\frac{8432}{25}=$ less than 337.28

The minimum possible value of breadth $=\frac{8432}{28}=301.14$

It means breadth will not be less than 301.14 cm
Therefore, Quantity : I > Quantity : II

Hence, option A is correct.
7. Quantity I : at present, let the age of $A=3 x$ years the age of $B=4 x$ years 2 years hence, the product of their age $=(3 x+2) \times(4 x+2)=2214=54 \times 41=$ $(52+2) \times(39+2)$

Therefore, $x=13$ years

At present, the age of $A=39$ years and the age of $B=52$ years

5 years ago, the sum of their age $=(39-5)+(52-5)=91-10=81$ years
The reqd. average $=\frac{81}{2}=40.5$ years

## Quantity II : 36

Therefore, Quantity : II < Quantity : I

Hence, option A is correct.
8. From January $1^{\text {st }} 2018$ to August $15^{\text {th }} 2018$, the total number of days $=227$ days

The $S I=\frac{P \times R \times T}{100}=\frac{1825 \times 10 \times 227}{100} \div 365$
$=\frac{5 \times 227}{10}=$ Rs. 113.5

Therefore, Quantity : I < Quantity : II

Hence, option C is correct.

9. The $\mathrm{SP}=90 \%$ of $600=540$

Profit $=25 \%$

Therefore, the cost price
$=\frac{\mathrm{SP} \times 100}{100+\mathrm{p} \%}=\frac{540 \times 100}{125}=108 \times 4=432$

Therefore, Quantity : I < Quantity : II

Hence, option C is correct.
10. The number of letters in 'COGRESS' $=7$

Where S is two times

The reqd. number of ways $=\frac{7!}{2!}=\frac{5040}{2}=2520$

Therefore, Quantity : I > Quantity : II

Hence, option A is correct.

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