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# Mixed Maths Questions for SBI Clerk Pre and IBPS Clerk Pre Exams.

## SBI Clerk Pre Maths Quiz 2

Direction: Study the following questions carefully and choose the right answer.

1. The average age of A, B and C is 30 years. If the difference between B's age and A's age is same as the difference between C's age and B's age. If D is 40 years older than B then what is the sum of the age of B and D?

- A. 130 years      B. 100 years      C. 60 years      D. 75 years      E. None of these

2. Babloo has candy and chewing gum in the ratio of 17: 19. He ate 5 candies but purchased 25 more chewing gums then the number of chewing gums becomes 50% more than that of candies. How many chewing gums he had in starting?

- A. 190      B. 95      C. 57      D. 76      E. None of these

3. A motorcyclist takes 2 hour more to go uphill than to come downhill. If the ratio of his speeds to come downhill to go uphill is 5 : 4 then how total how much time will he take in the entire journey? (the total distance to go uphill is same as that of come downhill)

- A. 16 hours      B. 12 hours      C. 20 hours      D. 14 hours      E. None of these

4. From 10 kgs of sunflower seeds, 2.5 litres of oil can be extracted. A person has 45 kg of sunflower seeds but he mixes the oil extracted from them with coconut oil in the ratio of 2 : 3 respectively then how many litres of coconut oil will be required to make the mixture of sunflower oil and coconut oil?

- A. 16.875 litres      B. 16.225 litres      C. 18.775 litres      D. 15.675 litres      E. None of these

5. 10 men started working together but at the end of every day from the first day, 1 man left the work. In this way, they complete the total work in 8 days. If the efficiency of one woman is 25% less than that of one man then how many women can complete the triple of the work in double of the time?

- A. 12      B. 16      C. 13      D. 17      E. None of these

6. A certain manufacturing company sells its product in 45 regions worldwide with an average of 60 stores per region. Last year, these stores sold an average of 75 units per store then what was the average of the total units of products sold in region wise?

- A. 4500      B. 45      C. 100      D. 250      E. None of these

7. Ruchika saves some amount at the end of each month and she had saved total of Rs 640 till the end of 2017 and Rs. 1025 till the end of 2018. Which of the following is closest to the percentage increase/decrease in the amount Ruchika saved during the year 2018 compare to the amount she saved during the year 2017? (assume that she started saving from the year 2017 only)

- A. 60% increase      B. 43% increase      C. 60% decrease      D. 40% decrease      E. None of these

8. The windows of a room are in the shape of regular hexagon, each side of which is 60 cm. In the room there are total of 5 such kind of windows which are covered with glass. What would be the total cost of laminating one side of the glass of windows with at the rate of Rs. 10 per sq. cm? ( $\sqrt{3} = 1.732$ )

- A. Rs. 467640      B. Rs. 448460      C. Rs. 492530      D. Rs. 428440      E. None of these

9. On a particular day, in Navsera passenger train, 30% of the total number of passengers were travelling without ticket and 30% of the remaining number of passengers were travelling with daily pass. The number of passengers who had purchased ticket was 2450 , then what was the number of passengers who were travelling without ticket?

- A. 5000      B. 4500      C. 3000      D. 1500      E. None of these

10. A and B together can do a piece of work in 20 days but B and C together take 25 days to compete the same piece of work. When A works alone, he takes  $16 \frac{2}{3}$  less days than that of C to complete the same piece of work. In how many days, C alone can complete the piece of work?

- A.  $100/3$  days      B. 40 days      C. 75 days      D. 50 days      E. None of these

**Correct Answers:**

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

## Explanations:

1. According to the question,  $(B - A) = (C - B)$

$$2B = A + C$$

$$\text{Let } B = x$$

$A = x - d$  years and  $C = x + d$  years then the above condition is satisfied

$$\text{Now, } x - d + x + x + d = 30 \times 3$$

By solving,  $x = 30$  years

$$\text{And } D = B + 40 = 30 + 40 = 70 \text{ years}$$

The required sum =  $30 + 70 = 100$  years

Hence, option B is correct.

2. Let the number of candies =  $17x$  and the number of chewing gums =  $19x$

According to the question,

$$150\% \text{ of } (17x - 5) = (19x + 25)$$

$$(17x - 5) \times 3 = 2 \times (19x + 25)$$

$$51x - 15 = 38x + 50$$

$$13x = 65$$

$$x = 5$$

The required answer =  $19 \times 5 = 95$

Hence, option B is correct.

3. Let the time taken to go uphill =  $x + 2$  hour then time to come downhill =  $x$  hour

Since, the distance is same

Let the speed to come downhill =  $5a$  km per hour then the speed to go uphill =  $4a$  km per hour

We know that, distance = speed  $\times$  time

$$5a \times x = 4a(x + 2)$$

$$x = 8 \text{ hours}$$

Therefore, the total distance taken by him in the entire journey =  $8 + 10 = 18$  hours

Hence, option E is correct.

4. From 10 kg of sunflower, 2.5 kg of oil can be extracted

Therefore, from 45 kg of sunflower seeds

$$\text{The quantity of oil} = \frac{2.5 \times 45}{10} = 11.25 \text{ litres}$$

In the mixture, let the quantity of sunflower oil =  $2x$  litres = 11.25 litres

$$x = 5.625 \text{ litres}$$

Therefore, the quantity of coconut oil required =  $3x = 3 \times 5.625 = 16.875$  litres

Hence, option A is correct.

5. Let the efficiency of one man = 4 units per day

Then on the first day, the number of units done by 10 men =  $10 \times 4 = 40$  units

On 2<sup>nd</sup> day,  $9 \times 4 = 36$  units

On 3<sup>rd</sup> day,  $8 \times 4 = 32$  units

On 4<sup>th</sup> day,  $7 \times 4 = 28$  units

On 5<sup>th</sup> day,  $6 \times 4 = 24$  units

On 6<sup>th</sup> day,  $5 \times 4 = 20$  units

On 7<sup>th</sup> day,  $4 \times 4 = 16$  units

On 8<sup>th</sup> day,  $3 \times 4 = 12$  units

The total units of work done by them in 8 days =  $(40 + 36 + 32 + 28 + 24 + 20 + 16 + 12) = 208$  units

The efficiency of one woman = 75% of 4 = 3 units per day

Triple of the work =  $208 \times 3$  units

The double of the time =  $8 \times 2 = 16$  days

Let  $x$  women work together then,  $x \times 3 \times 16 = 208 \times 3$

$$x = 13 = \text{The number of women}$$

Hence, option C is correct.

6. In 45 regions, there are total  $60 \times 45 = 2700$  stores

The total number of units sold in all the store together =  $2700 \times 75 = 202500$

The average total number of units sold in all 45 regions

$$= \frac{202500}{45} = 4500$$

Hence, option A is correct.

7. The total amount she saved during the year 2017 = 640

The total amount she saved during the year 2018 =  $1025 - 640 = 385$

$$\text{The reqd. \% decrease} = \frac{(640 - 385) \times 100}{640} = \frac{255 \times 100}{640} = 39.843\%$$

= closest to 40%

Hence, option D is correct.

8.

$$\text{The area of a hexagon} = 6 \times \frac{\sqrt{3}}{4} \times a^2$$

where a is the side of the hexagon

By putting a = 60 cm

$$\text{The area of one such hexagon shaped window} = 6 \times \frac{\sqrt{3}}{4} \times 60 \times 60 = 5400\sqrt{3} \text{ sq.cm}$$

The area of 5 such windows =  $5 \times 5400 \times 1.732$

The total cost of lamination one side of the glass @ 10 per sq. cm =  $5 \times 5400 \times 1.732 \times 10 = \text{Rs. } 467640$

Hence, option A is correct.

9. On the particular day, let the total number of passengers =  $100x$

The total number of passengers who were travelling without ticket = 30% of  $100x = 30x$

The remaining number of passengers =  $100x - 30x = 70x$

The total number of passengers who were travelling on daily pass = 30% of  $70x = 21x$

The remaining number of passengers =  $70x - 21x = 49x = 2450$

$$x = 50$$

Therefore, the total number of passengers who were travelling without ticket =  $30 \times 50 = 1500$

Hence, option D is correct.

10.

$$\frac{1}{A} + \frac{1}{B} = \frac{1}{20} \dots\dots\dots(i)$$

$$\frac{1}{B} + \frac{1}{C} = \frac{1}{25} \dots\dots\dots(ii)$$

According to the question,

$$A = C - \frac{50}{3} \text{ days}$$

Put the value of  $A = C - \frac{50}{3}$  in the equation (i)

$$\frac{1}{\left(C - \frac{50}{3}\right)} + \frac{1}{B} = \frac{1}{20} \dots\dots\dots(iii)$$

Subtracting equation (iii) and (ii)

$$\frac{1}{\left(C - \frac{50}{3}\right)} - \frac{1}{C} = \frac{1}{20} - \frac{1}{25} = \frac{1}{100}$$

$$\frac{C - C + \frac{50}{3}}{C \times \left(C - \frac{50}{3}\right)} = \frac{1}{100}$$

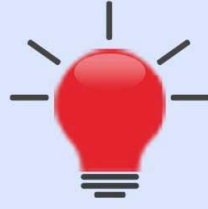
$$\frac{50}{3} \times 100 = c^2 - c \times \frac{50}{3}$$

$$3c^2 - 50c - 5000 = 0$$

By solving,  $c = 50$  or  $-33.33$

Negative value is not possible therefore,  $c = 50$  days

Hence, option D is correct.



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