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# Quantitative Aptitude Questions & Answers For SBI PO 2019 | Free Study Material For Bank PO

## SBI PO PRE MATHS QUIZ 8

Directions: Read the following questions carefully and choose the right answer.

1. In a mixture of milk and water, the quantity of milk is 8 litres and the quantity of water is 12 litres. After adding some litres of pure milk in the mixture, the quantity of water in the total mixture is 10%. How many litres of pure milk were added in the mixture?

- A. 80 litres                      B. 120 litres                      C. 60 litres  
D. 100 litres                      E. None of these

2. A shopkeeper marked the price of an article 25% above the cost price and offered 10% discount on the marked price then he earns Rs. 600 profit. If the cost price was increased by 10%, then what should be the marked price if the shopkeeper wants to earn the same amount of profit after giving a 20 % discount on the marked price?

- A. Rs. 7250                      B. Rs. 7350                      C. Rs. 7500  
D. Rs. 7750                      E. None of these

3. There is a group of 5 men, 6 women, and 8 children. 1 man, 1 woman and one child are going to be selected to play a game. In how many ways can the selection be done?

- A. 480 ways                      B. 240 ways                      C. 120 ways  
D. 360 ways                      E. None of these

**4. Sunil gives 10% discount on the marked price of an article and gains a profit of 8%. He wants to double his amount of profit after giving the same percentage of discount, then by what percent above the cost price should he mark the price of the article?**

- A.  $28\frac{8}{9}\%$                       B.  $26\frac{1}{9}\%$                       C.  $32\frac{8}{9}\%$   
D.  $25\frac{5}{9}\%$                       E. None of these

**5. An inlet pipe can fill a water tank in 8 hours but 5 inlet pipes of same efficiency and 7 outlets pipe of same efficiency working together take 24 hours to fill the empty tank. Find the number of hours, four inlets pipe and 4 outlets pipe working together will take to fill the empty tank?**

- A. 4 hours                      B. 6 hours                      C. 8 hours  
D. 10 hours                      E. None of these

**6. A person earn 10% profit on the marked price. If he tripled the marked price but gave 40% discount on the new marked price then how much percentage of profit did he gain?**

- A. 50%                      B. 150%                      C. 100%  
D. 200%                      E. None of these

**7. The average weight of 30 boys in a group is 52 kg. Five boys were replaced by five girls, the average weight of which was 42 kg then, the average weight of all the persons (boys and girls**

together) become 48 kg. What is the sum of weight (In kg) of all the boys who were replaced by girls?

- A. 75                                      B. 340                                      C. 320  
D. 330                                      E. None of these

8. A pipe was cut into two parts. The longer part of the pipe is 70% more than that of the shorter part of the pipe. Now, what part of the longer part of the pipe should be cut to make one of the two parts of that become equal to the shorter part?

- A.  $\frac{17^{th}}{20}$  part                                      B.  $\frac{17^{th}}{20}$  part                                      C.  $\frac{7^{th}}{17}$  part  
D.  $\frac{7^{th}}{10}$  part                                      E. None of these

9. Ram invests Rs. x under simple interest at the rate of 10% per annum for y years and receive the amount as Rs. 5x at the end of y years. If Rani invests Rs. 2x under simple interest at the rate of Z% per annum for y years and receive the amount as Rs. 18x at the end of y years. What is the value of Z?

- A. 50%                                      B. 20%                                      C. 40%  
D. 30%                                      E. None of these

10. A person sells an article for Rs. 1440. He finds that his loss percentage is one – sixtieth of the cost price. At what price should he sell the article to gain profit percentage as one – sixtieth of the cost price? (It is known that the cost price of the article is more than double of selling price)

- A. Rs. 3840                                      B. Rs. 6280                                      C. Rs. 5760  
D. Rs. 5240                                      E. None of these

### Correct answers:

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

### Explanations:

1.

After adding some litres of milk, water become 10%

Let x litres of milk was added in the mixture then

$$10\% \text{ of } (8 + x + 12) = 12$$

$$20 + x = 120$$

$$x = 100 \text{ litres}$$

Hence, option D is correct.

2.

Let the CP = Rs. 100x then MP = 125% OF 100x = Rs. 125x

SP after offering 10% discount on the marked price =  $(100 - 10)\%$  of 125x =  
90% of 125x = Rs. 112.5x

The profit =  $112.5x - 100x = 12.5x = 600$

$$x = 48$$

$$\text{CP} = 100x = 100 \times 48 = \text{Rs. } 4800$$

The new CP after it was increased by 10%

$$(100 + 10)\% \text{ of } 4800 = 110\% \text{ of } 4800 = 110 \times 48 = \text{Rs. } 5280$$



The shopkeeper wants to earn the same amount of money i.e. Rs. 600

The SP = Rs. (5280 + 600) = Rs. 5880

Let new MP = x then (100 – 20)% of x = 5880

80% of x = 5880

$$x = \frac{5880 \times 5}{4} = 7350$$

Hence, option B is correct.

**3.**

The required number of ways =  ${}^5C_1 \times {}^6C_1 \times {}^8C_1 = 5 \times 6 \times 8 = 240$  ways

Hence, option B is correct.

**4.**

Let the cost price = Rs. 100x

Then profit = 8% then SP = 108% of 100x = Rs. 108x

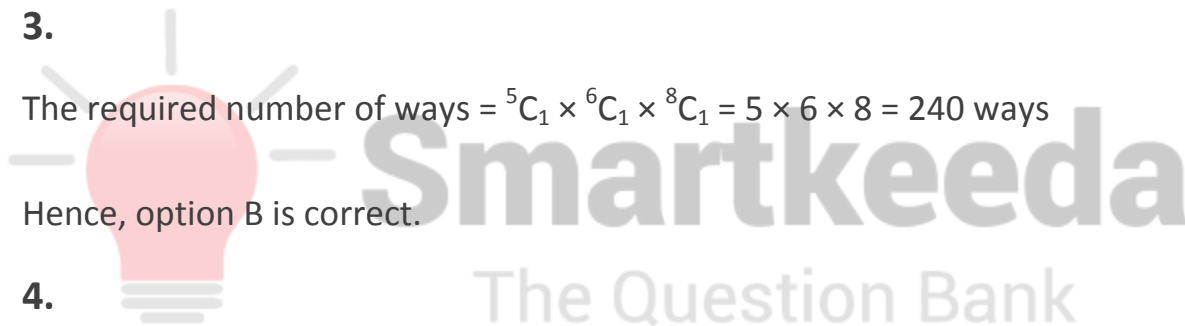
Discount of 10% on the written price then

$$\text{Marked price} = \frac{100 \times \text{SP}}{100 - D} = \frac{100 \times 108x}{100 - 10} = \frac{100 \times 108x}{90} = \text{Rs. } 120x$$

Now he wants to double the amount of profit =  $8x \times 2 = 16x$

New selling price = Rs. (100x + 16x) = Rs. 116x

Let new marked price = Rs. a then



$(100 - 10)\%$  of  $a = 116x$

$$a = \frac{116x \times 100}{90} = \frac{1160x}{9}$$

$$\text{The reqd. \%} = \frac{(1160x/9 - 100x) \times 100}{100x} = \frac{260}{9} \% = 28 \frac{8}{9}\%$$

Hence, option A is correct.

**5.**

Let the efficiency of outlet pipes =  $x$  then'

$$\frac{5}{8} - \frac{7}{x} = \frac{1}{24}$$

$$\frac{14}{24} = \frac{7}{x}$$

$$\frac{1}{12} = \frac{1}{x}$$

$x$  = Number of hours taken by outlet pipe to empty the tank

The number of hours, 4 inlet pipes and 4 outlet pipes will take

$$\frac{4}{8} - \frac{4}{12} = \frac{1}{6} = 6 \text{ hours}$$

Hence, option B is correct.

**6.**

Let the marked price = Rs.  $100x$  then profit = 10% of  $100x$  = Rs  $10x$

Cost price =  $100x - 10x$  = Rs  $90x$



New marked price =  $100x \times 3 = \text{Rs } 300x$

Selling price =  $(100 - 40) \% \text{ of } 300x = 60\% \text{ of } 300x = \text{Rs } 180x$

The reqd. profit % =  $\frac{(180x - 90x) \times 100}{90x} = 100\%$

Hence, option C is correct.

**7.**

The sum of the weight of 30 boys =  $30 \times 52 = 1560 \text{ kg}$

5 boys left the average weight of which was  $y \text{ kg}$

The sum of the weight of boys who left =  $5 \times y \text{ kg}$

The sum of the weight of 5 new girls =  $5 \times 42 = 210 \text{ kg}$

The sum of weight of all =  $1560 - 5y + 210 = 30 \times 48 = 1440 \text{ kg}$

$5y = 330$

Hence, option D is correct.

**8.**

Let the length of smaller part =  $10x$  units then the length of longer part =  $170\% \text{ of } 10x = 17x$  units

Now,  $17x$  units was cut into two part one of which part =  $10x$  units then other will be  $17x - 10x = 7x$  units

Let  $\frac{a}{b}$ th part was cut then

$\frac{a}{b}$ th part of  $17x = 10x$



$$\frac{a}{b} = \frac{10}{17}$$

Therefore,  $10/17^{\text{th}}$  part of  $7/17^{\text{th}}$  part was cut then one of two parts will be equal be  $10x$  units

Hence, option C is correct.

**9.**

For Ram,  $SI = 5x - x = 4x$

$$SI = \frac{P \times R \times T}{100}$$

$$4x = \frac{x \times 10 \times y}{100}$$

$$y = 40 \text{ Years}$$

For Rani,

$$SI = 18x - 2x = 16x$$

$$16x = \frac{2x \times z \times 40}{100}$$

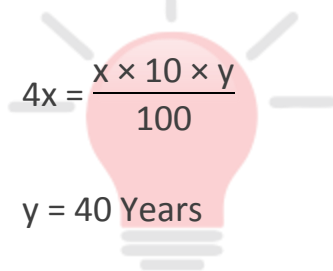
$$z = 20\%$$

Hence, option B is correct.

**10.**

$$SP = \text{Rs. } 1440$$

$$\text{Loss percentage} = 1/60^{\text{th}} \text{ of CP}$$



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Let CP = 100x then loss percentage

$$= \frac{1}{60}^{\text{th}} \text{ of } 100x = \frac{10x}{6} \%$$

$$SP = \frac{(100 - \text{Loss } \%) \times CP}{100}$$

$$\left(100 - \frac{5x}{3}\right) \times \frac{100x}{100} = 1440$$

$$(300 - 5x) \times x = \text{Rs. } 4320$$

$$5x^2 - 300x + 4320 = 0$$

By solving,  $x = 24$  and  $36$

Cost price can be Rs. 2400 or Rs. 3600

But from the question, the cost price is greater than  $2 \times 1440$

Therefore, CP = Rs. 3600

$$\text{Profit} = \frac{1}{60}^{\text{th}} \text{ of } 3600 = 60\%$$

$$SP = (100 + 60)\% \text{ of } 3600 = 160 \times 36 = \text{Rs. } 5760$$

Hence, option C is correct.



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