



SmartKeeda
The Question Bank

Presents

TestZone

India's least priced Test Series platform

JOIN

12 Month Plan

2018-19 All Test Series

@ Just

₹ **399/-**

300+ Full Length Tests

- Brilliant Test Analysis
- Excellent Content
- Unmatched Explanations

JOIN NOW

Mixed Maths Questions for SBI PO Pre, IBPS PO Pre, IBPS Clerk Mains, SBI Clerk Mains and LIC AAO Pre Exams.

Bank PO Maths Quiz 30

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

1. Abhishek deposited a certain amount on compound interest at 10% per annum in a bank. But after two years he debited Rs. 465 from the bank. If the total amount received after four years was Rs. 23,595 then find the interest he got in first three years.

- A. Rs. 5218 B. Rs. 5415 C. Rs. 5620 D. Rs. 5564 E. Rs. 5365

2. The population of a city in the year 2016 is 8% more than the population of the same city in the year 2015. In July 2016, 12% of total population migrated to a different city and in the month of December 75% of them returned again in the city. If the population in the city in 2015 was 3 lakh, then what was the population of the city in the beginning of 2017?

- A. 235710 B. 342520 C. 178870 D. 314280 E. 288450

3. A and B alone can do a work in 24 days and 32 days, respectively. A starts the work and worked alone for first 3 days and then B joined A. B and A together do the work for next 3 days and then another person C joined both. If the total work was completed in 13 days, then in how many days A and C together can complete the work together?

- A. 12 days B. 16 days C. 15 days D. 10 days E. 18 days

4. A pipe fills a cubical tank at the rate of 72 m^3 per minute in 24 minutes. If a cylindrical tank having height same as the side of a cubical tank and the curved surface area of the cylindrical tank is 1056 m^2 , then find the difference between the volumes of cylindrical tank and cubical tank.

- A. 5242 m^3 B. 5664 m^3 C. 5568 m^3 D. 5420 m^3 E. 5380 m^3

5. Sunil and Sushil together started a business with investment of Rs. 22400 and Rs. 25600, respectively. After a year, Sunil increased his investment by 15% while Sushil decreased his investment by 25% with respect to the previous year. If the total profit at the end of 2 years was Rs. 20750, then find the profit share of Sunil.

- A. Rs. 10250 B. Rs. 10750 C. Rs. 9580 D. Rs. 11200 E. Rs. 9500

6. An article was sold at 30% discount. If the same article was sold at 36% discount, then there would have loss of Rs. 240. If the article was marked 62.5% above the cost price, then find the original selling price of article.

- A. Rs. 2940 B. Rs. 2520 C. Rs. 2800 D. Rs. 2100 E. None of these

7. A path of width 4 m has been made inside along the boundary of a rectangular field. The length of field is 48 m and area of field is 1440 m². How many tiles of dimension 80 × 56 cm² will be required to pave the path?

- A. 1180 B. 1340 C. 1120 D. 1420 E. 1250

8. A container contains water and alcohol in the ratio 18 : 13. A man mixed 15 liters of water in the container and then ratio of water to milk in the container becomes 3 : 2. What will be the ratio, if 15 liters of alcohol has been added?

- A. 32 : 27 B. 36 : 29 C. 35 : 31 D. 33 : 26 E. None of these

9. The ratio of quantity of petrol to quantity of diesel in a container P was 24 : 7. 124 litres of the mixture is sold and 64 litres of another mixture containing quantity of petrol to quantity of diesel in the ratio 9 : 7 is mixed in container P. If the final ratio of quantity of petrol to quantity of diesel in the container P became 20 : 7, then what was the quantity of petrol present in the container P initially?

- A. 360 litres B. 240 litres C. 480 litres D. 384 litres E. 288 litres

10. Ranjeev bought a book at Rs. 4000. He marked it up by 'x'% above the cost price and then sold it at a discount of 10%. Raman also bought a book at Rs. 2500 and marked it up by 'x/2'% above cost price and then sold it at a discount of 20%. If the sum of the selling prices of the two books was Rs. 7440, then find the value of 'x'.

- A. 40 B. 50 C. 30 D. 45 E. 35

Correct Answers:

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

Explanations:

1. Let, amount of money deposited by Abhishek = Rs. x
 So, total amount after 2 years = $x \times \{(1.1)^2\} = \text{Rs. } 1.21x$
 Since, after 2 years, he debited Rs. 465.
 So, amount after 2 years = Rs. $(1.21x - 465)$
 Therefore, $(1.21x - 465) \times (1.1)^2 = 23595$
 $1.4641x - 562.25 = 23595$
 $1.4641x = 24157.65$
 $x = \text{Rs. } 16500$
 So, Interest of first 3 years = $0.21x + (1.21x - 465) \times 0.1 = 3465 + 1950 = \text{Rs. } 5415$
 Hence, option B is correct.

- 2.** Population of city in 2016 = 108% of 300000 = 324000
Number of people migrated = 12% of 324000 = 38880
Number of people left in the city = 324000 – 38880 = 285120
Number of people returned to the city = 75% of 38880 = 29160
So, the population of the city in 2017 = 285120 + 29160 = 314280
Hence option D is correct.

- 3.** Let, total work = LCM of 24 and 32 = 96 units

So, A does $\frac{96}{24} = 4$ units of work in a day.

And, B does $\frac{96}{32} = 3$ units of work in a day.

Total units of work completed in first 3 days = $4 \times 3 = 12$ units

Total units of work completed in first 6 days = $12 + 7 \times 3 = 12 + 21 = 33$

Remaining work = $96 - 33 = 63$

And, time taken to complete 63 units of work is 7 days as total work was completed in 13 days.

So, combined efficiency of A, B, and C = $\frac{63}{7} = 9$

Therefore, efficiency of C = $9 - 7 = 2$ units

Required time = $\frac{96}{6} = 16$ days

Hence, option B is correct.

- 4.** Capacity of cubical tank = $72 \times 24 = 1728 \text{ m}^3$

Let, side of cubical tank = 'x' m

So, $x^3 = 1728 \text{ m}^3$

$x = 12 \text{ m}$

So, height of cylindrical tank = 12 m

Let, radius of cylindrical tank = 'r' m

So, $2 \times \frac{22}{7} \times r \times 12 = 1056$

$r = 14 \text{ m}$

Volume of cylindrical tank = $\frac{22}{7} \times 14 \times 14 \times 12 = 7392 \text{ m}^3$

Required difference = $7392 - 1728 = 5664 \text{ m}^3$

Hence, option B is correct.

5. Total investment of Sunil = $22400 + 115\%$ of $22400 = 22400 + 25760 = \text{Rs. } 48160$
Total investment of Sushil = $25600 + 75\%$ of $26500 = 25600 + 19200 = \text{Rs. } 44800$
Ratio of profit share of Sunil and Sushil = $48160 : 44800 = 43 : 40$

$$\text{Profit share of Sunil} = \frac{43}{83} \times 20750 = \text{Rs. } 10750$$

Hence, option B is correct.

6. Let, marked price of article = Rs. x
So, original selling price = 70% of $x = \text{Rs. } 0.7x$
Decreased selling price = 64% of $x = \text{Rs. } 0.64x$
So, $0.7x - 0.64x = 240$
 $\Rightarrow 0.06x = 240$
 $\Rightarrow x = 4000$
original selling price = 70% of $4000 = \text{Rs. } 2800$
Hence, option C is correct.

7.

$$\text{Breadth of rectangle} = \frac{1440}{48} = 30 \text{ m}$$

$$\text{Area of path} = 1440 - 40 \times 22 = 1440 - 880 = 560 \text{ m}^2$$

$$\text{Number of tiles reqd.} = \frac{560 \times 100 \times 100}{80 \times 56} = 1250$$

Hence, option E is correct.

8. Let, initially amount of water and alcohol in the container be $18x$ liters and $13x$ liters, respectively.

$$\text{So, } \frac{18x + 15}{13x} = \frac{3}{2}$$

$$\Rightarrow 36x + 30 = 39x$$

$$\Rightarrow 3x = 30$$

$$\Rightarrow x = 10$$

Amount of water in the container initially = $18 \times 10 = 180$ liters

Amount of alcohol in the container initially = $13 \times 10 = 130$ liters

So, required ratio = $180 : (130 + 15) = 180 : 145 = 36 : 29$

Hence, option B is correct.

9. Let initially quantity of petrol and quantity of diesel is present in the container P was $24x$ litres and $7x$ litres respectively.

$$\text{Quantity of petrol left in container P after taking 124 litres of mixture} = 24x - \frac{24}{31} \times 124 = 24x - 96 \text{ litres}$$

$$\text{Quantity of diesel left in container P after taking 124 litres of mixture} = 7x - \frac{7}{31} \times 124 = 7x - 28 \text{ litres}$$

$$\text{Quantity of petrol mixed in container P from another mixture} = \frac{9}{16} \times 64 = 36 \text{ litres}$$

$$\text{Quantity of diesel mixed in container P from another mixture} = \frac{7}{16} \times 64 = 28 \text{ litres}$$

$$\text{So, } \frac{24x - 96 + 36}{7x - 28 + 28} = \frac{20}{7}$$

$$168x - 420 = 140x$$

$$28x = 420$$

$$x = 15$$

$$\text{Quantity of petrol present in the container P initially} = 24x = 360 \text{ litres}$$

Hence, option A is correct.

10. Selling price of Ranjeev's book

$$= 90\% \text{ of } 4000 \times \left(1 + \frac{x}{100}\right) = \text{Rs. } 3600 \times \left(1 + \frac{x}{100}\right)$$

$$\text{Selling price of Raman's book} = 80\% \text{ of } 2500 \times \left(1 + \frac{x}{200}\right) = \text{Rs. } 2000 \times \left(1 + \frac{x}{200}\right)$$

$$\text{So, } 3600 \times \left(\frac{100 + x}{100}\right) + 2000 \times \left(\frac{200 + x}{200}\right) = 7440$$

$$\Rightarrow 36 \times (100 + x) + 10 \times (200 + x) = 7440$$

$$\Rightarrow 46x + 5600 = 7440$$

$$\Rightarrow x = 40$$

Hence, option A is correct.



SmartKeeda

The Question Bank

प्रस्तुत करते हैं

TestZone

भारत की सबसे किफायती टेस्ट सीरीज़

अभी
जुड़ें

12 Month Plan

2018-19 All Test Series

@ Just

₹ 399/-

300+ फुल लेन्थ टेस्ट

- श्रेष्ठ विश्लेषण
- उत्कृष्ट विषय सामग्री
- बेजोड़ व्याख्या

अभी जुड़ें