

Banking Daily Quiz Blog - March 25



1. Speed of a boat in still water is 120% of its upstream speed in a river. After covering 105 km downstream it returns and covers $28\frac{4}{7}\%$ of distance covered in downstream. If time taken in downstream is 3 hours more than time taken in return trip then find the speed of current.

A 2 km/hr

B 2.5 km/hr

C 3 km/hr

D 4 km/hr

E 3.5 km/hr

Solution

Let speed of boat in still water = x km/hr

and speed of current is = y km/hr

$$\text{so, } x = \frac{120}{100}(x - y)$$

$$\frac{x}{y} = \frac{6}{1}$$

Let $x = 6n$ & $y = n$

According to question,

$$\frac{105}{7n} - \frac{\frac{200}{7}\% \times 105}{5n} = 3$$

$$\frac{15}{n} - \frac{6}{n} = 3$$

$$n = \frac{9}{3} = 3$$

Speed of current = 3 km/hr

2. A, B and C invested on amount of Rs. 700, Rs. 500 and Rs. 1200 in an business for 1 year. If they invested more amount in the ratio 3 : 2 : 5 at the end of six months and total profit obtained at the end of year is Rs. 10,000 then find the profit share of C?

A Rs. 2500

B Rs. 5000

C Rs. 3000

D Rs. 4000

E Rs. 6500

Solution

Since initial investment is in the ratio 7 : 5 : 12 means sum of investment of A and B equal C and more amount invested at the end of six months also shows that sum of investment of A and B equals to C.

So profit of C will be half of total profit

$$\text{profit of C} = \frac{1000}{2} = \text{Rs } 5000$$

3. Veer bought some chairs and tables from a shopkeeper which are in ratio 9 : 8. Marked price of a chair and a table is in ratio 5 : 7 shopkeeper gives discount of 20% and 25% on chairs and tables respectively. If total discount offered is Rs. 4600. Find the total selling price of chairs?

A Rs. 6000

B Rs. 4800

C Rs. 3600

D Rs. 7200

E Rs. 5000

Solution

Let number of chairs and table bought be $9y$ and $8y$ respectively.

And marked price of chairs and tables equal $500x$ and $700x$

According to question,

$$500x \times 9y \times \frac{20}{100} + 700x \times 8y \times \frac{25}{100} = 4600$$

$$xy = 2$$

$$\text{Total selling price of chairs} = \frac{80}{100} \times 500 \times 9 \times 2$$

$$= \text{Rs } 7200$$

4. Wheat of x Rs./kg is mixed with wheat of y Rs./kg in the ratio $2 : 3$. On selling the mixture at 49 Rs./kg there is a gain of $16\frac{2}{3}\%$. If the quantity in which they were mixed is reversed and selling price remains same, then gain percent becomes $\frac{550}{19}\%$. What is the value of 'x'?

A 25 Rs./kg

B 30 Rs./kg

C 28 Rs./kg

D 32 Rs./kg

E 20 Rs./kg

Solution

$$\text{C.P. of mixture} = 49 \times \frac{6}{7} = 42 \text{ Rs./kg}$$

$$\frac{2}{3} = \frac{y-42}{42-x}$$

$$84 - 2x = 3y - 126$$

$$3y + 2x = 210 \dots (i)$$

New cost price of mixture after reverting the quantity in which they are mixed.

$$\left(1 + \frac{11}{38}\right) \times \text{new CP} = 49$$

$$\text{New CP} = 49 \times \frac{38}{49}$$

$$= 38 \text{ Rs/kg}$$

So,

$$\frac{3}{2} = \frac{y-38}{38-x}$$

$$114 - 3x = 2y - 76$$

$$190 = 2y + 3x \dots (ii)$$

Solving (i) and (ii)

$$x = 30 \text{ Rs/kg}$$

5. **Four persons started to do a work together. 'A' works only in starting two days after that B, C and D works alternately starting from B. Ratio of time taken by A, B, C and D if they work alone is 4 : 3 : 2 : 5. If the work is completed in 12 days then in how many days A and C can complete the work if they work together ?**

A 6 days

B 12 days

C 10 days

D 8 days

E None of these

Solution

A, B, C and D worked for 2 days together after that A leave and B, C and D worked alternatively for 10 days starting from B

∴ B worked for 4 days, C for 3 days, and D for 3 days.

Total days A worked = 2

Total days B worked = 4 + 2 = 6

Total days C worked = 3 + 2 = 5

Total days D worked = 3 + 2 = 5

Let, their alone time to complete the work is $4x$, $3x$, $2x$ and $5x$ respectively.

$$\therefore \frac{2}{4x} + \frac{6}{3x} + \frac{5}{2x} + \frac{5}{5x} = 1$$

$$\Rightarrow \frac{30+120+150+60}{60x} = 1$$

$$\Rightarrow x = \frac{360}{60} = 6$$

'A' can complete the work in $4 \times 6 = 24$ days

'C' can complete the work in $2 \times 6 = 12$ days

$$\text{Required time} = \frac{12 \times 24}{12+24} = \frac{12 \times 24}{36} = 8 \text{ days}$$

6. Given below the table which shows the total population of children in (Lakh) who attends school in five different states and percentage of boys in these students. Table also shows the total number of school in these five states.

Some values are missing in the table. You have to calculate these values if required to answer the question.

States	Total children who attend school	% of boys who attended school	Number of schools
West Bengal	48	$62\frac{1}{2}\%$	960
UP	-	$46\frac{3}{7}\%$	1400
Orissa	-	50%	2000
Bihar	-	$55\frac{5}{9}\%$	-
Karnataka	-	$66\frac{2}{3}\%$	2400

- A. By what percent number of schools in Karnataka should be decreased so that number of students per school who attend school in Karnataka becomes equal to number of students per school who attend school in West Bengal if total students who attended school in Karnataka is 25% more than total students who attend school in west Bengal.

A 60%

B 40%

C 45%

D 55%

E 50%

Solution

Number of students per school who attend school in West Bengal
 $= \frac{4800000}{960} = 5000$

Total students in Karnataka who attend school $= \frac{5}{4} \times 48 = 60$ lakh

Let new number of schools = x

So, $\frac{60,00000}{x} = 5000$

x = 1200

Required percentage $= \frac{2400-1200}{2400} \times 100 = 50\%$

B. Total number of girls who attend school in west Bengal are what percent of total boys in UP who attend school if average number of students per school who attend school in UP is 4000.

A $69\frac{3}{13}\%$

B 68%

C 72%

D 54%

E 88%

Solution

Total girls in west Bengal who attend school = $\frac{3}{8} \times 48$ Lakh

= 18 Lakh

Total students in UP who attend school = $4000 \times 1400 = 56$ Lakh

Total boys in UP who attend school = $\frac{325}{7} \% \text{ of } 56 = \frac{325}{100 \times 7} \times 56$

= 26 Lakh

Required percentage = $\frac{18}{26} \times 100$

= $\frac{9}{13} \times 100$

= $\frac{900}{13} \%$

= $69\frac{3}{13} \%$

- C. If average student per school in West Bengal, U.P., Orissa and Karnataka are in the ratio 10 : 8 : 8 : 5 and total girls in Bihar who attend school are 32L then find the total students in all five states who attend school.

A 280 Lakh

B 316 Lakh

C 392 Lakh

D 345 Lakh

E 290 Lakh

Solution

Students per school in West Bengal who attend school = $\frac{4800000}{960} = 5000$

Students per school in UP who attend school = $\frac{5000}{10} \times 8 = 4000$

Students per school in Orissa who attend school = $\frac{5000}{10} \times 8 = 4000$

Students per school in Karnataka = $\frac{5000}{10} \times 5 = 2500$

Total students from all states = $(48 + 56 + 80 + 72 + 60)$ Lakh
= 316 Lakh

- D. What is the average number of school in all five states if total number of boys who attend school in Bihar is 40 lakh and average number of students per school who attend school in Bihar is 4000.**

A 1780

B 1630

C 1712

D 1535

E 1820

Solution

$$\frac{500}{9}\% \rightarrow 40 \text{ Lakh}$$

$$100\% \Rightarrow \frac{40 \times 9}{500} \times 100$$

$$\Rightarrow 72 \text{ Lakh}$$

$$\text{Total schools in Bihar} = \frac{7200000}{4000} = 1800$$

$$\text{Required average} = \frac{960+1400+2000+1800+2400}{5} = 1712$$

- E. If average number of students per school who attend school in Orissa is 4000 and for Karnataka it is 2500 then find the total number of girls in these two states who attend school.

A 70 Lakh

B 60 Lakh

C 50 Lakh

D 45 Lakh

E

65 Lakh

Solution

Total students in Orissa who attend school = $2000 \times 4000 = 8000000 = 80$ lakh

Total students in Karnataka who attend school = $2500 \times 2400 = 60$ lakh

Required number of girls = $\frac{1}{2} \times 80 + \frac{1}{3} \times 60 = 60$ lakh

