

Mixtures And Alligations Questions Overview

Mixtures And Alligations Questions have a good weightage in the Banking Exam and the type of question asked in Banking exam is similar to the question mentioned below. It has been solved and explained by Gargi.ai Experts and they have tried to elaborate the concept used in Mixtures And Alligations Questions.

Question

The ratio of wine and water in two different containers is 1 : 2 and 3 : 4. In what ratio we are required to mix the mixtures of the containers to get the ration of water and wine in the new mixture be 7 : 4?

Difficulty : Moderate

Average Time : 36 Seconds

Options :

1. 5 : 4
2. 7 : 15
3. 15 : 7
4. 3 : 2
5. 6 : 7



Solution

The correct answer is **option 3** i.e **15 : 7**

Solution :

The given ratios

$$(\text{Wine})_1 : (\text{Water})_1 = 1 : 2$$

$$(\text{Wine})_2 : (\text{Water})_2 = 3 : 4$$

$$(\text{Wine})_x : (\text{Water})_x = 4 : 7$$

Now taking with respect to wine,

$$\text{For first container, } (\text{wine})_1 = 1/3$$

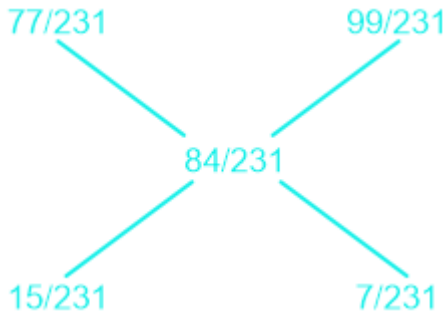
$$\text{For second container } (\text{wine})_2 = 3/7$$

For the final mixture, $(\text{wine})_x = 4/11$

Taking $\text{LCM}(3,7,11) = 231$

$(\text{Wine})_1 = 77/231$ $(\text{wine})_2 = 99/231$ $(\text{wine})_x = 84/231$

Applying alligation,



The ratio in which the mixtures of the two containers are mixed is 15 : 7.

