

MIXTURE AND ALLIGATION

ASSIGNMENT -1

1. In 4 litres of milk and water mixture, the concentration of milk is 80%. A woman takes out 20% of the total mixture and add the same quantity of water. With the total quantity of new mixture, she wants to prepare coffee where the concentration of water should be 60%. How many litres of more water will she require to prepare coffee?

A. 2.6 litres

B. 2.4 litres

C. 2 litres

D. 2.5 litres

E. None of these

2. A farmer mixes two varieties of rice of price Rs. 36 per kg and Rs. 24 per kg in the ratio of 1: 2, respectively. He sold the mixture for Rs. 2100 to earn a profit of 25%, then find the quantity of rice of cost Rs. 24 per kg used in the mixture.

A. 20 kg

B. 30 kg

C. 40 kg

D. 50 kg

E. 60 kg

3. A vessel contains 208 litres mixture of milk and water mixed in the ratio 11 : 5 respectively. '8x' litres of mixture is taken out of the vessel and replaced with '3x - 4' litres of water so that the ratio of milk to water in the vessel becomes 4 : 3 respectively. Find the difference between the final quantities of milk and water in the vessel.

A. 21 litres

B. 22 litres

C. 23 litres

D. 24 litres

E. 25 litres

4. A container contains a mixture of liquid A and liquid B in the ratio 12 : 13 respectively. Some amount of mixture have been withdrawn and some amount of liquid C is added and then the ratio of liquid A, liquid B and liquid C become 24 : 26 : 29 respectively. After adding liquid C, the total amount of mixture in the container is 10 litres less than the initial amount of mixture. If the amount of liquid A taken out from container is 146 litres less than the amount of liquid C added to the container, then find the amount of liquid B initially in the container.

A. 416 litres

B. 650 litres

C. 468 litres

D. 325 litres

E. None of these

5. Two vessels A and B of equal volume contain milk and water in the ratio 3 : 2 and 2 : 1 to their brim respectively. Two litres of the solution from vessel A and three litres of the solution from vessel B are poured into a big empty vessel C. If the solution in C occupied 40% of the capacity of C, what proportion of the volume of vessel C should be the volume of water that shall be added so that the ratio of milk and water in vessel C becomes 1 : 1?

A. $\frac{21}{125}$

B. $\frac{2}{25}$

C. $\frac{4}{75}$

D. $\frac{14}{125}$

E. None of these