

Mixture and Allegation

1. A vessel is filled with liquid, 3 parts of which are water and 5 parts syrup. How much of the mixture must be drawn off and replaced with water so that the mixture may be half water and half syrup?
A) $\frac{1}{3}$ B) $\frac{1}{4}$ C) $\frac{1}{5}$ D) $\frac{1}{7}$
2. Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio 1 : 1 : 2. If the mixture is worth Rs. 153 per kg, the price of the third variety per kg will be:
A) Rs.169.50 B) Rs.170 C) 175.50 D) Rs.180
3. A can contains a mixture of two liquids A and B in the ratio 7 : 5. When 9 liters of mixture are drawn off and the can is filled with B, the ratio of A and B becomes 7 : 9. How many liters of liquid A were contained by the can initially?
A) 10 B) 20 C) 21 D) 25
4. A milk vendor has 2 cans of milk. The first contains 25% water and the rest milk. The second contains 50% water. How much milk should he mix from each of the containers so as to get 12 liters of milk such that the ratio of water to milk is 3 : 5?
A) 4 liters, 8 liters B) 6 liters, 6 liters C) 5 liters, 7 liters D) 7 liters, 5 liters
5. In what ratio must a grocer mix two varieties of pulses costing Rs. 15 and Rs. 20 per kg respectively so as to get a mixture worth Rs. 16.50 kg?
A) 3 : 7 B) 5 : 7 C) 7 : 3 D) 7 : 5
6. A dishonest milkman professes to sell his milk at cost price but he mixes it with water and thereby gains 25%. The percentage of water in the mixture is:
A) 4% B) 64% C) 20% D) 25%
7. How many kilogram of sugar costing Rs. 9 per kg must be mixed with 27 kg of sugar costing Rs. 7 per kg so that there may be a gain of 10% by selling the mixture at Rs. 9.24 per kg?
A) 36kg B) 42kg C) 54kg D) 63kg
8. A container contains 40 liters of milk. From this container 4 liters of milk was taken out and replaced by water. This process was repeated further two times. How much milk is now contained by the container?
A) 26.34 B) 27.36 C) 28 D) 29.16
9. A jar full of whisky contains 40% alcohol. A part of this whisky is replaced by another containing 19% alcohol and now the percentage of alcohol was found to be 26%. The quantity of whisky replaced is:
A) $\frac{1}{3}$ B) $\frac{2}{3}$ C) $\frac{2}{5}$ D) $\frac{3}{5}$
10. In what ratio must water be mixed with milk to gain $16\frac{2}{3}\%$ on selling the mixture at cost price?
A) 1: 6 B) 6 : 1 C) 2 : 3 D) 4 : 3

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11. Find the ratio in which rice at Rs. 7.20 a kg be mixed with rice at Rs. 5.70 a kg to produce a mixture worth Rs. 6.30 a kg.
A) 1: 3 B) 2 : 3 C) 3 : 4 D) 4 : 5
12. In what ratio must a grocer mix two varieties of tea worth Rs. 60 a kg and Rs. 65 a kg so that by selling the mixture at Rs. 68.20 a kg he may gain 10%?
A) 3 : 2 B) 3 : 4 C) 3 : 5 D) 4 : 5
13. The cost of Type 1 rice is Rs. 15 per kg and Type 2 rice is Rs. 20 per kg. If both Type 1 and Type 2 are mixed in the ratio of 2 : 3, then the price per kg of the mixed variety of rice is:
A) Rs.18 B) Rs.18.50 C) Rs.19 D) Rs.19.50
14. 8 liters are drawn from a cask full of wine and is then filled with water. This operation is performed three more times. The ratio of the quantity of wine now left in cask to that of water is 16: 65. How much wine did the cask hold originally?
A) 18 liters B) 24 liters C) 32 liters D) 42 liters
15. A merchant has 1000 kg of sugar, part of which he sells at 8% profit and the rest at 18% profit. He gains 14% on the whole. The quantity sold at 18% profit is:
A) 400kg B) 560kg C) 600kg D) 640 kg
16. The ratio, in which tea costing Rs. 192 per kg is to be mixed with tea costing Rs. 150 per kg so that the mixed tea when sold for Rs. 194.40 per kg, gives a profit of 20%
A) 1: 2 B) 2 : 5 C) 3 : 5 D) 3 : 7
17. In a zoo, there are Rabbits and Pigeons. If heads are counted, there are 200 and if legs are counted, there are 580. How many pigeons are there?
A) 90 B) 100 C) 110 D) 120
18. In a 729 liters mixture of milk and water, the ratio of milk to water is 7:2. To get a new mixture containing milk and water in the ratio 7:3, the amount of water to be added is:
A) 51 liters B) 61 liters C) 71 liters D) 81 liters
19. Three types of wheat of Rs. 1.27, Rs. 1.29 and Rs. 1.32 per kg are mixed together to be sold at Rs. 1.30 per kg. In what ratio should this wheat be mixed?
A) 1: 2:3 B) 1: 1 : 2 C) 2 : 1: 3 D) 2 : 2 : 3
20. How many liters of water should be added to a 30 liter mixture of milk and water containing milk and water in the ratio of 7 : 3 such that the resultant mixture has 40% water in it?
A) 7 liters B) 10 liters C) 5 liters D) None of these