

IEM KOLKATA
MIXTURE AND ALLIGATION
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Q1) In a mixture of 90 litres, the ratio of acid and water is 2:1. If the ratio of acid and water is to be 1:2, then the amount of water (in litres) to be added to the mixture is?

Q2) 3 types of sugar got mixed by accident in a shop. First was of the rate ₹145 per kg and second of ₹165 per kg. Only thing the shop owner knew was that quantities of 3 sugar types were in the ratio 2:1:3 respectively. He finally sold the mix at rate if ₹180 per kg. What was the price of 3rd type?

Q3) A mixture of two food items has a salt to sugar ratio of 7:32. The ratio of salt to sugar is 2:11 and 5:21, in the two individual types of food items. In what proportion are the 2 food items mixed?

Q4) A solution of honey and water is 28 litres, with honey and water in ratio 4:3. To this a 21 litre honey-water solution is added that has honey to water ratio as 2:1. Again a 51 litre honey-water solution that has honey to water ratio as 9:8 is added to this. After this 10 litre of the solution is replaced with pure honey. What is the ratio of water to honey in the final mixture?

Q5) Rohit buys some rice at ₹10.40 per kg. He mixes it with some rice having price ₹8.8 per kg. The final mixture becomes 15 kg in weight and with total worth ₹146.40. What is the quantity of rice priced at ₹8.8 per kg?

Q6) Sunil started a juice (lemon syrup+water) counter. Initially he had 140 litre juice which had 30% water in it. He sold 20 litres of the juice. Then he added equal amount of lemon syrup and water. Now the ratio of water to lemon syrup became 1:2. How much water was added later on?

Q7) A milkman had water and milk mixture in a can with water to milk ratio 5:7. He accidentally spills 9 litres of the mixture. He then fills the can with water equal in quantity to the spilled mixture. This makes the water to milk ratio 9:7. How much milk did the can initially have?

Q8) A mixture contains mango juice and water in the ratio 9:5 respectively. 28 litres of the mixture is replaced by water. Now the ratio of mango juice and water becomes 18:17. Find the quantity of mango juice in the initial mixture?

- (a) 60L (b) 90L (c) 30L (d) 45L