

IEM KOLKATA
MIXTURE AND ALLIGATION

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Q1) One can is completely filled and contains 100% water. Another similar can is completely filled with a solution of 50% wine and 50% water. When both the cans are emptied in a steel vessel, what will be the ratio of water to wine in the vessel?

Q2) Resultant price of mixture of golden rice is ₹480 per kg. This mixture is made from two varieties of golden rice which are having price of ₹420 per kg and ₹520 per kg. What should be the ratio of quantities of both types of golden rice?

Q3) A mixture consists of some amount of sandalwood oil and 240 litres of water. It is priced at ₹275 per litre. Sandalwood oil is priced at ₹325 per litre. How much oil is there in the mixture?

Q4) How much milk should be added in a milk solution to make milk quantity in it 75%, if 80 litres of milk solution has 45% milk in it?

Q5) Two containers have mixtures of milk & water, in the ratios 3:2 & 6:5 respectively. In what ratio should the contents be mixed so that the ratio of milk to water in the final mixture is 4:3?

- (a) 6:15 (b) 9:14 (c) 10:11 (d) 5:8

Q6) From a container of 50 litres pure milk, 10l milk is taken out & replaced by 10l of water. If this process is repeated thrice, what is the ratio of water to milk finally?

- (a) 7:16 (b) 9:16 (c) 61:64 (d) 64:61

Q7) In a mixture, milk & water are in the ratio of 1:4. Some milk is added to the mixture, because of which ratio of milk & water becomes 2:1. How much milk was added as a percentage of the initial mixture?

- (a) 400% (b) 200% (c) 240% (d) 140%

Q8) A pot contains 40 litres of juice. How much juice will be there in the pot, if 4 litres of juice was removed and was replaced by water and this process was again repeated twice?

Q9) One glass has juice and water in the ratio 5:2 while other glass has them in the ratio 7:4, respectively. If both glasses are poured in a vessel, then what will be the final ratio of water to juice in the vessel?

Q10) Ramesh mixes 60 litres of Type-1 acid with some litres of Type-2 acid. Type-1 acid rate is ₹32 per litre while Type-2 rate is ₹23 per litre. Ramesh sells this acid-mix at rate ₹28 per litre. How much Type-2 acid is needed to make it a no profit no loss transaction?