

Word Problems: Mixture Problems
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Solve each mixture problem.

1. A gas station owner has 30 gallons of gasoline worth \$1.20 per gallon and some worth \$1.40 per gallon. How many gallons of the \$1.40 brand must the owner mix in to produce gasoline that costs \$1.28 per gallon?
2. How many pounds of coffee worth \$1.44 a pound should be mixed with 20 pounds worth \$1.80 a pound to produce a mixture worth \$1.56 a pound?
3. An after-shave lotion contains 50% ethyl alcohol. How much water must be added to 6 fluid ounces of this lotion to reduce it to one which is 75% nonalcoholic? (Hint: 75% nonalcoholic is what percent alcoholic?)
4. How much water must be added to 20 ounces of a 15% solution of argyrol to reduce it to a solution that is 10% argyrol?
5. 2.5 kg of a nut mixture which is 50% peanuts is combined with 1kg of an 85% peanut mixture. What percent of the new mixture is peanuts?
6. How much of a 75% copper alloy should be melted into 62 kg of a 35% copper alloy to produce an alloy which is 50% copper?

Answers

1. 20 gallons of the \$1.40 per gallon gasoline
2. 40 pounds of coffee worth \$1.44 a pound
3. 6 fluid ounces of water
4. 10 ounces of water
5. 60% peanuts
6. 37.2 kg of a 75% copper alloy

Please visit the Learning Lab for further assistance.

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