

Mixture Problems with Guess-and-Check

NAMES:

Solve the mixture problem below. You may use any method you choose but a guess-and-check table is started for you. If you choose guess-and-check, complete the table or develop your own. If you make your own table, please label it explicitly. **Write your answer in a complete sentence with the appropriate units.**

*Bobbie has 10 gallons of 63% salt solution. How much 90% salt solution should she add to make a 70% salt solution?*

*[Hint: In the final mixture, there will be an **unchanging** 6.3 gallons of pure salt from the 10 gallons of 63% solution. Find that amount within column 3 below. There will also be an **unchanging** 10 gallons of “stuff” from that 63% solution. Find that amount within column 4 below. These values **remain constant** through the table.]*

Number of gallons of 90% solution added	Amount of salt coming from 90% solution (gallons)	Amount of salt in final mixture (gallons)	Total amount of stuff (water and salt) in final mixture (gallons)	Percentage of final mixture (decimal form)	Rating
10	$.9 \cdot 10 = 9$	$6.3 + 9 = 15.3$	$10 + 10 = 20$	$15.3 / 20 = .765$	too high