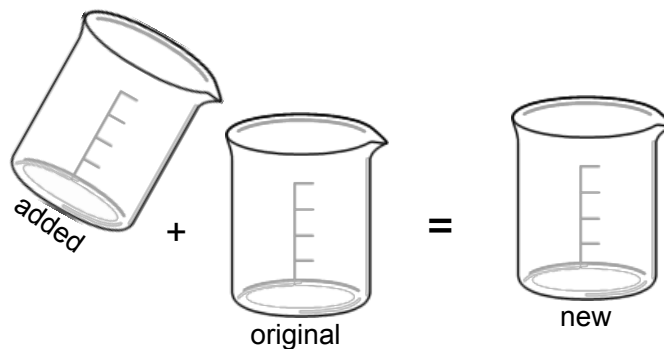


## 8-6C Mixture, Motion, and Work Problems

**weighted averages:** a method for finding the mean of a set of numbers in which some elements carry more importance, or weight, than others.

- weighted grades
- mixture problems
- distance (motion) problems
- work problems

**1. Mixture Problems:** adds a 65% fruit solution to 15 milliliters of a drink that is 10% fruit juice. How much of the 65% fruit juice solution must be added to create a fruit punch that is 35% fruit juice?



	original	added	new
amount of fruit juice			
total solution			

**1. Motion Problems:** swims for 5 hours in a stream that has a current of 1 mile per hour. She leaves her dock, swims upstream for 2 miles and then swims back to her dock. What is her swimming speed in still water?



time <b>with</b> current	time <b>against</b> current	total time

**3. Work Problems:** mow lawns together.  
 working alone could *barely* complete the job in 4.5 hours.  
 on the other hand, could complete the job alone in 3.7 hours. How long does it take them take to complete the job when they work together?



- how much of a lawn will \_\_\_\_\_ mow in 1 hour?
- how much of a lawn will \_\_\_\_\_ mow in x hours?
- how much of a lawn will \_\_\_\_\_ mow in 1 hour?
- how much of a lawn will \_\_\_\_\_ mow in x hours?
- write a rational equation that can determine how long it will take them to finish a lawn when working together.

## Attachments

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9-2HW.notebook