How to pour liquids and measure time

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[Adapted from "Math Circle for grades 6 and 7" by A. Spivak (in Russian).]

1. Can you measure 6 liters of water using a 4 liter pail and a 9 liter pail?

2. Can you measure 15 minutes using a 7 minute hourglass and an 11 minute hourglass?

3. You have an 8 liter bucket full of water. You have two 3 liter pails and a 5 liter pail (and no other containers). Can you measure exactly 4 liters of water using these pails so that in the end you have 4 liters left in the bucket and 4 liters are in the 5 liter pail?

4. You have a 12 liter bucket full of water. Divide the water equally between two other (big) buckets of unknown size using a 5 liter pail and an 8 liter pail.

5. You have over 13 gallons of gas. Can you measure 8 gallons of gas using a 9 gallon container and a 5 gallon container?

6. You have two full 10 liter containers of milk. You have two pots of sizes 4 and 5 liters respectively. Can you measure 2 liters of milk into each of the pots. (You can not dispose of milk. So, in the end, you should have 2 liters of milk in each of the pots, and the rest of the milk should be in the 10 liter containers).