## Volume and capacity word problems (customary units)

Hint: 16 ounces $=2$ cups $=1$ pint
2 pints = 1 quart
4 quarts $=1$ gallon

1. The capacity of a plastic container of milk is 1 gallon. The volume of a box container of milk is 2 pints and the volume of a can of milk is 3 pints. How many box containers of milk can the plastic container hold?
2. Ryan put 1 cup of syrup, 1 pint of water, and 2 quarts of pure pineapple juice in a pitcher. In cups, what is the volume of the mixture in the pitcher?
3. One bottle of alcohol contains 4 pints of alcohol. If there are 36 bottles of alcohol placed in one box, how much alcohol in quarts are there in the box?

4. There were 2 quarts of hot coffee in the kettle and 3 quarts of hot tea in the thermos. The waiter poured 35 ounces of coffee for the customers in the restaurant. In ounces, how much hot coffee was left in the kettle?
5. Everyone is encouraged to drink 64 ounces of water in a day. How many cups of water do we need to drink in one week?
6. A pitcher can hold 2 quarts of water and a mug can hold 12 ounces of water. Which holds more, 1 pitcher or 5 mugs? By how many ounces?

## Answers

1. 1 gallon $=4$ quarts $=8$ pints
$8 \div 2=4$ box containers
The plastic container of milk can hold 4 boxes of milk.
2. 1 pint $=2$ cups

2 quarts $=4$ pints $=8$ cups
$1+2+8=11$ cups
There are 11 cups of mixture in the pitcher.
3. $4 \times 36=144$ pints
$144 \div 2=72$ quarts
There are 72 quarts of alcohol in the box.
4. 2 quarts $=4$ pints $=8$ cups $=64$ ounces
$64-35=29$ ounces
There are 29 ounces of coffee left in the kettle.
5. 8 ounces $=1$ cup
$64 \div 8=8$ cups
$8 \times 7=56$ cups
We need to drink 56 cups of water in one week.
6. 5 mugs $x 12 \mathrm{oz}=60 \mathrm{oz}$

2 quarts of water $=64 \mathrm{oz}$
$64-60=4 \mathrm{oz}$
2 quarts of water is 4 oz more than 5 full mugs.

