MATH FOR KIDS
September 20, 2004

Challenge problems:

(1) There are two jars whose volumes are 3ℓ and 5ℓ. How one can pour 4ℓ of water from a water-pipe using only these two jars?

(2) The same question if one has to pour 7 liters of water using two jars of volumes 8ℓ and 5ℓ.

(3) One has two sand-glasses. The first one measures 7 minutes, while the second one can measure 11 minutes. How to measure using only these sand-glasses 15 minutes to boil an egg?

(4) There are one glass of coffee and one glass of milk. One spoon of milk is poured in coffee and then thoroughly intermixed. Then one pour a spoon of the mixture back into milk. Do we have a larger amount of coffee in milk or a larger amount of milk in coffee?

(5) The same question if one repeat the procedure
a) twice
b) three times.

(6) It took 2 min for a train of the length 750 m to pass a bridge. What is the train's speed if the length of the bridge is 1 km.