

Hints, Advice
and Info

Mini-Contests



Grandfather's Breakfast*

I was wondering if you can help me solve this puzzle:

Grandfather is a very hard-boiled customer. In fact, his eggs must be boiled for exactly 15 minutes, no more, no less. One day he asks you to prepare breakfast for him, and the only timepieces in the house are two hourglasses. The larger hourglass takes 11 minutes for all the sand to descend; the smaller takes 7 minutes. What do you do? ...Grandfather grows impatient...

Corrine

* This puzzle is derived from the old class of puzzles with measuring some value using several other constant values like different weights, barrels, cups, etc., and is one of several known versions with hourglasses.

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Mini-Contests

Grandfather's Breakfast (solution)

We've got solutions of two different types.

In the first group you start cooking and timing simultaneously. In the second group of solutions before you start cooking you have to measure 7 minutes, and then drop the eggs into the boiling water. The second way takes more time for cooking, but as it was required just to have the eggs boiled exactly 15 minutes, these also are correct solutions. Moreover, in this case you have to turn only the 11-minute hourglass, and you have to do this just once.

We show two solutions from our winners to illustrate both ways.

Solution from group 1 by Husnu Sincar

Turn both of the hourglasses on. 7 minutes later, 4 minutes of sand remains on 11 minutes hourglass. Turn the 7 minutes hourglass on again. At exactly 11 minutes turn the 7 minutes hourglass which has 4 minutes of sand on the bottom part on again; wait for this 4 minutes to end up with 15 minutes.

Solution from group 2 by Jane Average

Start both the 11 minute and 7 minute timer. When the 7 minute timer runs out, place the egg into the boiling water. When the 11 minute timer runs out, restart it. When it runs out the second time, take the egg out.

$11 - 7 = 4$ (the first 4 minutes in the water)
+11 (the second 11 minute timing set)
15 minutes

Have a great breakfast grandpa!