

I need 4 litres of water

I need to get exactly 4 litres of water. However, I have only 2 measuring cans, one of 5 litres and one of 3 litres. Neither can has any other markings on them. I have an unlimited supply of water and can pour water from can to can, empty and fill each can as much as I want. How do I fill up the cans and empty them so that end up with exactly 4 litres of water? When solved, try the same puzzle, but now you have to end up with exactly 1 litre.

Answer to last week's puzzle. First of all here is the puzzle:

An Insurance man rings the doorbell of a lady's house. When the lady answers, he asks her if she could answer some questions for him. She, grudgingly, replies "Ah, I guess so".

So he asks her, "How many children does she have?". She replies, "Three". He then asks her, "What are their ages?". She smiles, and refuses to tell.

He asks her a hint. She says, "Multiply their three ages and you get 36 (using exact, whole numbers for their ages)".

He thinks for a while, then asks, for another hint. She grins and states, "Add their ages and you get the number on the house next door".

He goes next door, and then returns and asks the lady for one more hint. "All right", she says, "the oldest plays the piano".

With that information, the Insurance man had his answer. Can you solve it?

Solution:

The table below, shows the combinations of three numbers that multiply to make 36 and their sums.

Three numbers	Product	Sum
1 x 1 x 36	36	38
1 x 2 x 18	36	21
1 x 3 x 12	36	16
1 x 4 x 9	36	14
1 x 6 x 6	36	13
2 x 2 x 9	36	13
2 x 3 x 6	36	11
3 x 3 x 4	36	10

As you can see the two outlined in red have the same Sum. Therefore that must be the house number next door, because he still needed one more hint. The correct answer must then be 2 x 2 x 9, since only one child is referred to when she said "the oldest plays the piano", so the twins must be younger than the other child.