

Water Buckets

With water from a hose, what amounts of water can you measure exactly using only a 5 litre bucket and a 3 litre bucket?

1 litre \rightarrow fill the 3L, pour it into the 5L, fill the 3L again, pour it into the 5L (there will only be room for 2L) then there is 1L left in the 3L bucket

2 litre \rightarrow fill the 5L & pour 3L into the 3L bucket. There is 2L left in the 5L bucket.

3L \rightarrow fill 3L bucket 4L - see below 5L - fill 5L bucket

6L \rightarrow follow instructions for 1L & fill 5L bucket

7L \rightarrow follow instructions for 2L, pour the 2L into the empty 3L bucket & fill the 5L bucket

8L \rightarrow fill both buckets

How could you make exactly 4 litres?

4L \rightarrow fill the 5 litre bucket & pour 3L into 3L bucket. pour out the 3L bucket and pour the remaining 2L from the 5L bucket into the 3L bucket. fill the 5L bucket again & pour 1L into the 3L bucket to fill it up (already 2L in it). Now there is 4L in your 5L bucket.

Thanks to bit.ly/mathwalks2020 for this puzzle