

Numeracy Puzzle of the Week



The cold water tap of a bath lets the water in at a rate of 15 litres per minute. The hot water tap of a bath lets the water in at a rate of 10 litres per minute.

The plug hole lets the water out at a rate of 12 litres per minute.

The bath holds a maximum of 520 litres.

Ryan turns on both taps but forgets to put the plug in. How long does it take for the bath to overflow?

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40 minutes

Water enters the bath at a rate of 25 litres per minute (15 litres from the cold tap and 10 litres from the hot).

Since the bath loses 12 litres per minute through the plug hole this means the bath is filling up at a rate of 13 litres per minute ($25 - 12 = 13$).

The bath can hold 520 litres so if it is filling up at 13 litres per minute it will overflow after $520 \div 13 = 40$ minutes.