

## Level 3 Certificate

# MATHEMATICAL STUDIES

## Benchmark 1

November 2021

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### Preliminary Material

#### REMINDER TO CANDIDATES

YOU MUST **NOT** BRING THIS PRELIMINARY MATERIAL  
WITH YOU WHEN YOU SIT THE BENCHMARK.  
A CLEAN COPY WILL BE MADE AVAILABLE.

#### Water

#### How much water does an 'average' person/household use?

Our household water is pumped from reservoirs to our homes.

Water authorities must ensure that there is always a sufficient supply of water to households.

The table below gives a guide to average water use based on the number of people living in a household.

Number of people living in a household	Annual water usage (cubic metres)
1	54
2	101
3	134
4	164
5	191
6	216

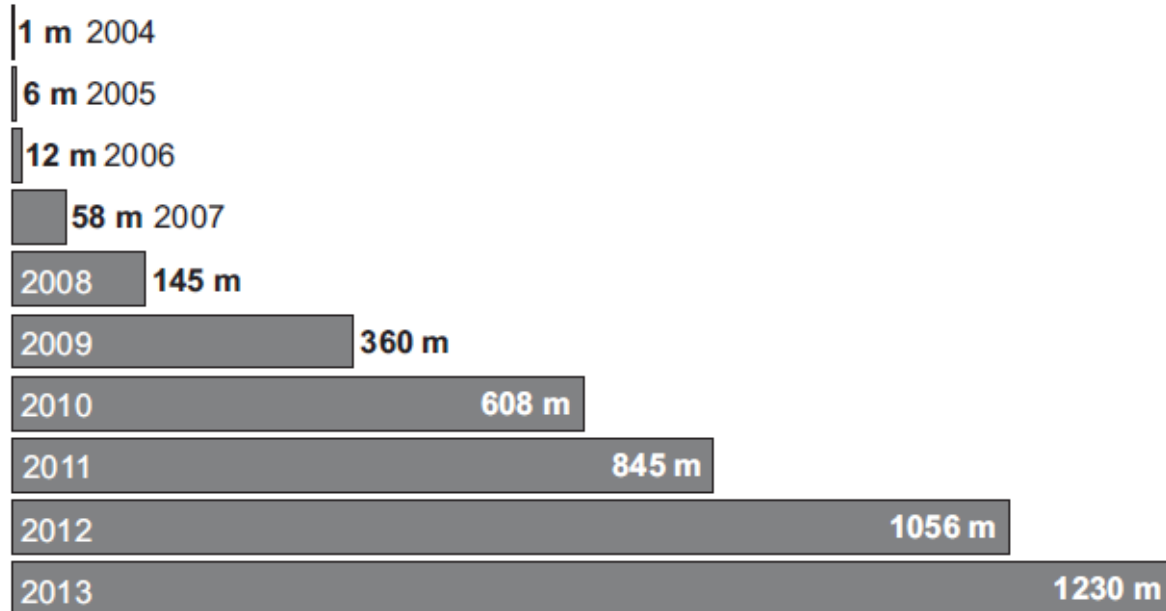
One cubic metre = 1000 litres

## Facebook Facts

On 4 February 2014, an article about Facebook appeared on the Guardian newspaper's website.

The information below is based on an extract from the article.

### Facebook: 10 years of social networking, in numbers



By the end of 2013, Facebook boasted 1230 million (1230 m) monthly active users worldwide, adding over 170 m in just one year. According to Facebook, 757 m users log on to Facebook daily, as of 31 December 2013

### \$1bn Facebook buys Instagram

On 9 April 2012, it was announced that Facebook had bought the popular photo-sharing app, Instagram. The app, which now (4 February 2014) also allows users to post videos and share images directly, boasts 150 m active users. It had 40 m active users at the time of purchase.

### 24 m Britons log on to Facebook each day

Facebook published its number of daily users in the UK for the first time in August 2013 and the figures showed that more than a third of the UK population were visiting the site every day.

### \$61.48 Current Facebook share price

Facebook set the final price of shares in its landmark flotation at \$38 (£24) back in May 2012

The stock now (4 February 2014) changes hands at \$61.48