

Data sheet

Unusual measures

In science, engineering, business and especially the media, there are many examples of the use of unusual units to describe measurements. This is often done to give the story more impact and to give people a better sense of the actual size of the objects involved. Here are a few examples.

Length

Double-decker bus

Newspapers will frequently refer to lengths in comparison to the length (8.4 metres) or height (4.4 metres) of a London Routemaster double-decker bus.



length 8.4m, height 4.4m

For example: *The Coast Redwood in California is the tallest tree in the world at 115m, the height of about 26 double-decker buses.*

Area

Belgium or Wales

The area of Belgium is 30,528 km² and is often used, for example, in discussing the destruction of the Amazon Rainforest. In the United Kingdom, Wales, equal to 20,779 km², is used in phrases such as "an area the size of Wales" or "twice the area of Wales".

Belgium



area = 30,528 km²

Wales



area = 20,779 km²

For example: *The coastguard were searching an area of 3 million square kilometres, about 100 times the area of Belgium.*

Volume*Olympic-sized swimming pool*

One measure commonly used in the media in many countries is the Olympic-sized swimming pool. An Olympic-sized swimming pool holds about 2,500,000 litres.



volume = 2,500,000 litres

For example: *By 2010, there will be $10,000\text{m}^3$ of nuclear waste in the country - enough to fill four Olympic size swimming pools.*

Questions

Unusual measures

1

Clifton suspension bridge in Bristol is said to be the length of 26 double-decker buses.

Work out its approximate length in metres.

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2

The tallest building in the UK is at Canary Wharf and is 235m high.

Work out how many double-deckers high it is.

3

The area of England is 130,410 km².

How many times the area of Wales is this?

4

Russia has the largest area of any country in the world.

Its area is approximately 559 times the area of Belgium.

How many times bigger is Russia compared to Wales?

5

The average UK household uses approximately 150 litres of water per day.

How long will it take to for this usage to be enough to fill an Olympic-sized swimming pool?

6

The state of New Mexico in the United States is approximately square.



New Mexico is shown shaded on the map.

It has an area equivalent to approximately 10 times the area of Belgium.

Work out the approximate length and width of New Mexico in kilometres.

7

The London Routemaster double-decker bus is 2.4 metres wide.

Someone suggests using the approximate volume of a Routemaster bus as a new unit for volume (assuming its shape is a cuboid).

How many of these are equivalent to the volume of an Olympic-sized swimming pool?
