

Waste and Recycling

How much waste do we produce?

1/**Residual (unrecycled) waste** = 55% of all waste = 275 kg/per person/per year
Multiplied by 65,000,000 (population) = 17,875,000,000 kg for the population/annually.

2/ **Recycled waste** (45% of all waste):.

275 divided by 55 multiplied by 45 is the amount which one resident recycles annually= 225 kg
225 kg X 65,000,000 (population) is the amount recycled = 14,625,000,000 kg by the population annually.

Total waste produced is = Residual + recycled = 17875 million+14625 million=32,5 billion kgs

Q1: How many plastic bottles does the family use each week, on average?

Step 1: Find out how many plastic bottles are made with 1 kg of plastic

First we find out how many plastic bottles are made in the UK annually.

The answer of how many plastic bottles are made is 15,000,000 x 365 or 5,475,000,000

Next we find out how many kilos of plastic are used to make plastic bottles.

The answer for this is 275,000 tonnes or 275,000,000 kg.

Next we divide the two together to find out how many plastic bottles are made out of 1 kg of plastic.
5,475,000,000 divided by 275,000,000 = 19.91 (Rounded from 1.'90' repeated) This mean that about 19.91 plastic bottles are made from 1 kg of plastic.

Step 2: Find out how many plastic bottles the family uses in a week on average.

The family produces 40 kg of plastic in a year, so we need to divide this by 52 to find out how much plastic they produce weekly. This is 40 divided by 52 which is 0.76923076923 or if we round it (0.77.)
Because one half of the plastic the family uses is plastic bottles means they use 0.76923076923 divided by 2 which is 0.38461538461. This is how much plastic the family uses weekly for plastic bottles. Next we have to calculate how many plastic bottles are made with that amount of plastic.
Which is 0.38461538461 multiplied by 19.91 (Or the plastic bottles made with a single kilo of plastic) which is equal to 7.65730769231 or if we round it 8. Which answer question 1

Q2: How much of the family's recycling (in weight) is made up of other materials?

Using the cards I got the answers

- Aluminium Cans
26 kg /year
- Glass
189 kg/ year
- Paper
615 kg/ year
- Garden waste
Total of household waste which is 830 kg divided by 60 and multiplied by 40 to get the correct proportion of the waste that is recycled and that is 553 kg annually