Place value, ordering and rounding

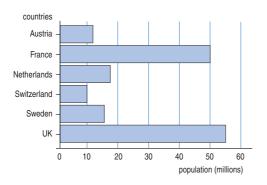
As outcomes, Year 8 pupils should, for example:

Use vocabulary from previous year and extend to: recurring decimal...

Round positive whole numbers to a given power of

10, in mathematics and in other subjects. For example:

 This chart shows the estimated population of six countries. Write in figures the approximate population of each country.



- On the chart above, Sweden is recorded as having an estimated population of 15 million.
 What is the highest/lowest population that it could actually have?
- There are 1 264317 people out of work.
 Politician A says: 'We have just over 1 million people out of work.'

Politician B says: 'We have nearly one and a half

million people out of work.'

Who is more accurate, and why?

As outcomes, Year 9 pupils should, for example:

Use vocabulary from previous years and extend to: significant figures, upper and lower bounds...
Read and write the 'approximately equal to' sign (~).

Use rounding to make estimates.

For example:

• The population of the world is about 5300 million.

The approximate populations of the four largest cities are:

Mexico City	21.5 million
Sao Paulo	19.9 million
Tokyo	19.5 million
New York	15.7 million

The tenth largest city is Rio de Janeiro with a population of 11.9 million.

Estimate the percentage of the world's population which lives in the ten largest cities.

 A heavy metal in water kills fish when it reaches levels of more than 4 parts per million.
 A lake contains 4.7 megalitres of water.
 How much heavy metal can be in the water for the fish to be safe, if 1 litre of the heavy metal has a mass of 2.4 kg?

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