

# Document extract

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### A FEEL FOR BIG NUMBERS

Children are often fascinated by large numbers. This stimulus page, along with A Million Dots, is designed to capitalise on this interest. News reports often refer to numbers in the billions and sometimes trillions and yet these numbers are meaningless unless we have some idea of their size.

The question 'Have you lived for a million seconds?' is designed to show how a million 'small things' soon add up.

$1\ 000\ 000 \div 60 \div 60 \div 24$  shows that one million seconds is slightly over  $11\frac{1}{2}$  days (11.57 days). Students may like to calculate the time in days, hours and minutes. Even 1000 000 000 (one billion) seconds has passed by the time a person reaches 32 (31.7 yrs). Note: Australia now commonly defines a billion as a thousand million ( $10^9$ ), not a million million (see *Macquarie Dictionary*). However, **officially**, Australia still recognises a billion as being a million million ( $10^{12}$ ).

Counting from one to one million would take longer than  $11\frac{1}{2}$  days because as the numbers become larger it would take longer than one second to say each number. Students may also bring up fatigue, losing count and so on as possible difficulties.

See also page 45, A Million Dots and page 47, List of Large Numbers.

# A FEEL FOR BIG NUMBERS



**?** Did you know that (very strictly speaking) it is easier to become a billionaire in the United States than it is to become a billionaire in the United Kingdom?

In the United States a billion is 1 000 000 000 but in the United Kingdom and Australia 1 000 000 000 is only a thousand million. A billion in the United Kingdom is 1 000 000 000 000.

## Hints and Ideas

I'm confused. How much money do you need to be called a billionaire in Australia?



Find out if you have lived for a million seconds.



60 minutes in an hour ...

24 hours in a day!

60 seconds in a minute ...

## Notes and Calculations

Yes } No

How long would it take to count from one to one million?

## Notes and Calculations

### Questions

Where will you find the information?

What did you find out?

How will you present your findings?

### Findings