

AccountAble™

121. Dealing with Millions and Billions – 2

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US System (contd.)

Quadrillion: A quadrillion means a thousand trillion (1,000,000,000,000,000)¹. Literally, this means thousand thousand thousand thousand thousands. Or, you could say, 1, followed by 15 zeros. Mathematicians express this as 10^{15} .

As expected, the Latin prefix *quad* means four, as in *quadruped*. What is a quadruped? An animal that has four (*quad*) feet (*ped*).

If we stacked up a quadrillion pennies² in a cube, what would we get³? A cube measuring 2730 x 2730 x 2730 feet! That's roughly half a mile wide, and would weigh three billion tons!!



Clearly, even loose change can make a big difference if stacked together!

¹ One followed by 12 zeros, same as British billion

² 1,000,067,088,384,000 pennies to be precise.

³ To see what it would look like, visit http://www.kokogiak.com/megapenny/seven_teen.asp. Last visited 18-Aug-2006

Centillion: The list then continues⁴ in the same manner, till the time we reach a *centillion*. A cent means a hundred. So you have to repeat your thousand for a hundred times.

A centillion is counted when you write thousand a hundred times, before you write the final 'thousands'. All told, it gives you $(100 \times 3) + 3 = 303$ zeros.

British System⁵

The British system is essentially the original French system, as designed by Chuquet in 1484. Here million is used as a step. This means that the number names change only when multiplied by a million.

In some ways this system is more logical than the short-scale system. However, it is also much more unwieldy. For instance, if you wanted to say 900000,000000 in words, you would have to say nine hundred thousand million. In the US system this would be said as nine hundred billion.

Talking of unwieldiness, can you guess how the Romans would have written 1,888 in Roman numerals? Turn to the end of this issue for the answer.

Million: A million means one thousand thousands (1,000,000). This is the same

⁴ Quintillion, Sextillion, Septillion, Octillion, Nonillion, Decillion, Undecillion, Duodecillion.

⁵ Also known as the Long Scale system

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Kharab, Trillion or Billion ?

Figure	Scien- tific	Indian	US	British/ German
1,00,000	10 ⁵	Lakh	Hundred Thousand	Hundred Thousand
10,00,000	10 ⁶	10 Lakh	Million	Million
1,00,00,000	10 ⁷	Crore	10 Million	10 Million
10,00,00,000	10 ⁸	10 Crore	100 Million	100 Million
1,00,00,00,000	10 ⁹	Arab	Billion	1,000 Million
10,00,00,00,000	10 ¹⁰	10 Arab	10 Billion	10,000 Million
1,00,00,00,00,000	10 ¹¹	Kharab	100 Billion	1,00,000 Million
10,00,00,00,00,000	10 ¹²	10 Kharab	Trillion	Billion
1,00,00,00,00,00,000	10 ¹³	Neel	10 Trillion	10 Billion
10,00,00,00,00,00,000	10 ¹⁴	10 Neel	100 Trillion	100 Billion
1,00,00,00,00,00,00,000	10 ¹⁵	Padm	Quadrillion	1,000 Billion
10,00,00,00,00,00,00,000	10 ¹⁶	10 Padm	10 Quadri- lion	10,000 Billion
1,00,00,00,00,00,00,00,000	10 ¹⁷	Shankh	100 Quadri- lion	1,00,000 Billion
10,00,00,00,00,00,00,00,000	10 ¹⁸	10 Shankh	Quintillion	Trillion
1,00,00,00,00,00,00,00,00,000	10 ¹⁹	Samudra	10 Quintillion	10 Trillion
10,00,00,00,00,00,00,00,00,000	10 ²⁰	10 Samu- dra	100 Quinti- lion	100 Trillion
1,00,00,00,00,00,00,00,00,00,000	10 ²¹	Antya	Sextillion	1,000 Trillion