YOU & MATHS   Write $2.3 \times 10^{-2} + 3.5 \times 10^{-3}$ as a decimal number.
Say if this number is greater than or less than 0.02.

(IR *Leaving Certificate Examination, Ordinary Level*, 1994)

To write $2.3 \times 10^{-2} + 3.5 \times 10^{-3}$ as a decimal number, let's first convert the two scientific notations into decimal numbers. Before doing that, we recall that multiplying by a negative power of 10 is equivalent to dividing by a positive power of 10, which means that we have to move the decimal point to the left:

$2.3 \times 10^{-2} = 0.023$;
$3.5 \times 10^{-3} = 0.0035$.

We can then say that:

$2.3 \times 10^{-2} + 3.5 \times 10^{-3} = 0.023 + 0.0035 = 0.0265$.

By comparing 0.0265 and 0.02, we can tell right away that our answer is greater than 0.02.