This is a way of writing very large or very small numbers without having to use lots of zeros.

A number in standard form is

\[ a \times 10^n \]

\( a \) must be between 1 and 10

\( n \) shows how many places to move the decimal point

**Examples**

1. There are about \( 5.9 \times 10^9 \) people in the world.
   Write this as an ordinary number.

   \[ 5.9 \underbrace{000000000} \]

   so \( 5900000000 \)

2. Write \( 3.6 \times 10^{-5} \) as an ordinary number

   \[ 0.000036 \]

   so \( 0.000036 \)

3. Write \( 934000000 \) in standard form.

   \[ 934000000 \]

   \( = 9.34 \times 10^8 \)
\[4\] Write \(0.003\) in standard form

\[0.003 = 3 \times 10^{-3}\]

[Large numbers have a positive power of 10, small numbers have a negative power of 10]