



# Floating-Point Numbers!

An IEEE 754 floating point number consists of three parts:

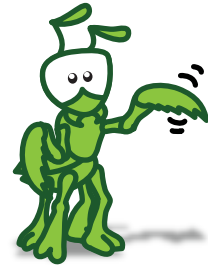
the Sign,



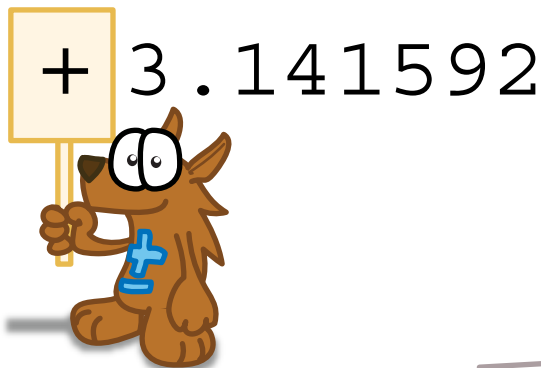
the Exponent,



and the Mantissa.

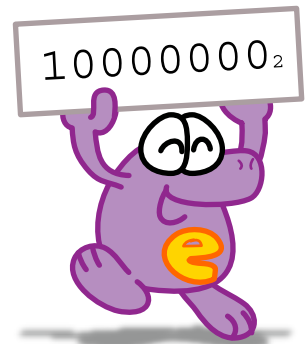


(Also known as the Significant)

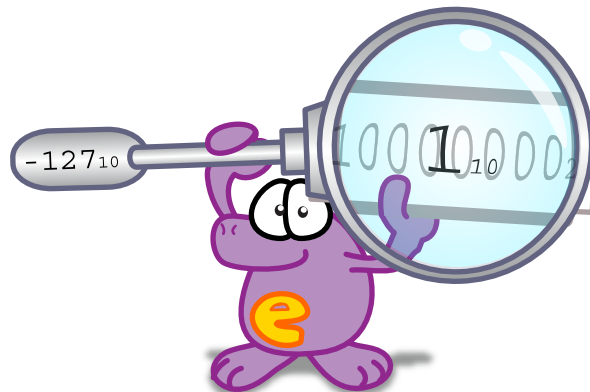


The Sign, as its name suggests, determines the sign of the number.

The Exponent plays a vital role in determining how big (or small) the number is. However, it's encoded so that unsigned comparison can be used to check floating-point numbers.



To see the true magnitude of the Exponent, you'd need to subtract the Bias, a special number determined by the length of the Exponent.



And last but not least, the Mantissa holds the significant digits of the floating point number.

