

CS 208

W, 6 March 2024

Data representation using bits

int \rightarrow binary (hex)

fixed-size ints & two's
comp to do < 0

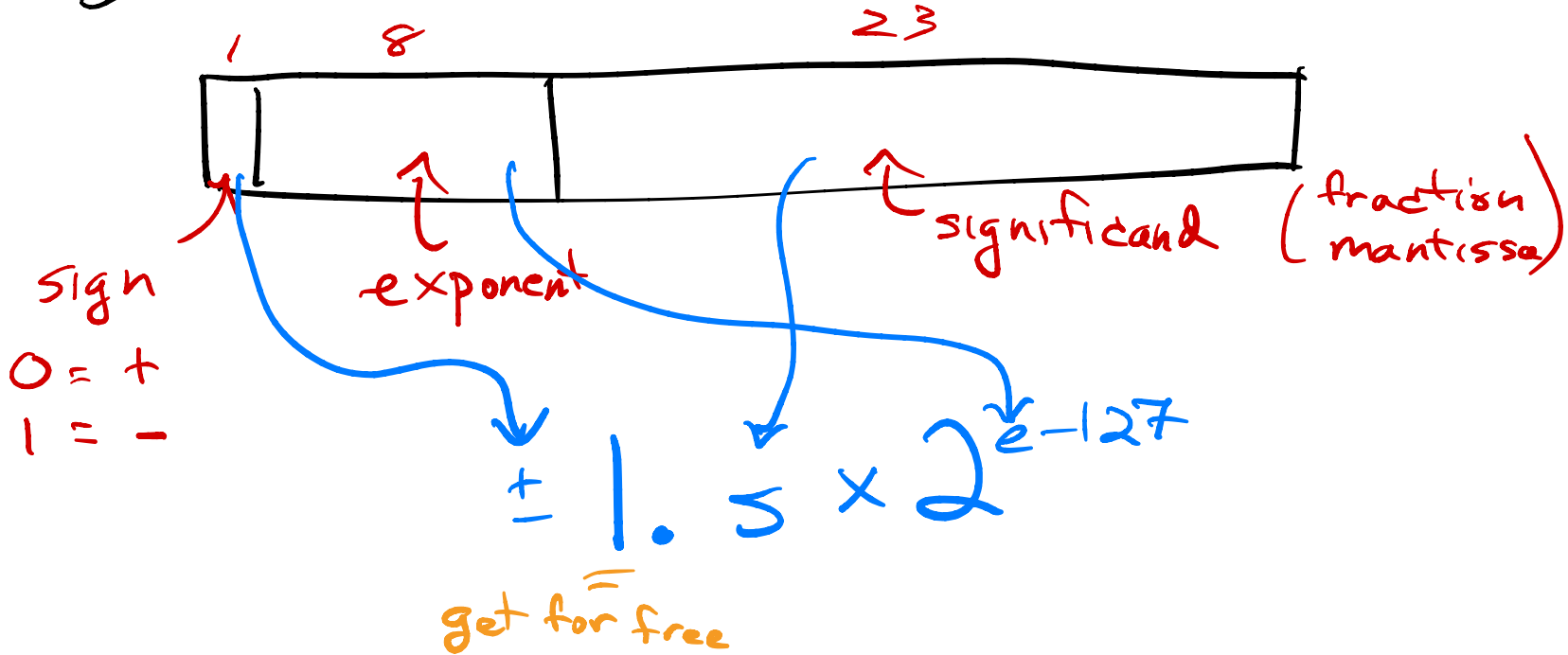
characters \rightarrow codepoints

ASCII
UTF-16LE
BE
UTF-8 \rightarrow encoding \rightarrow seq. of bytes

Representing real #s

"Binary scientific notation"

IEEE 754 standard



0xC0D00000

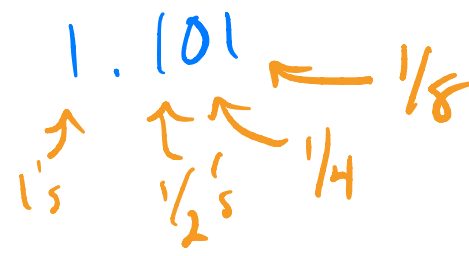


$$-1.101 \times 2^{129-127}$$

$$\approx -1.101 \times 2^2$$

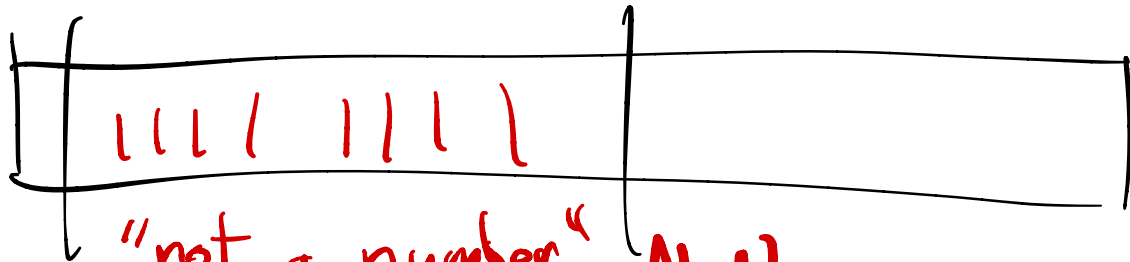
$$\approx -110.1$$

$$\approx -6\frac{1}{2}$$





special
(0 or "denormalized")



"not a number" NaN

or
-infinity

