

$X_{hex} = 431D30B0$
 $X_2 = 01000001100011101001100001011$
 $X_{hex} = X_2 =$

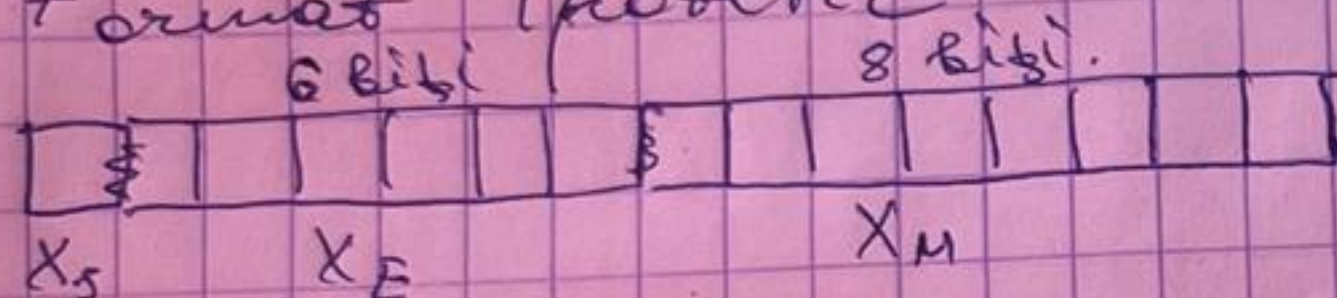
$$X_{hex} = X_2 = \underbrace{01001000}_{67 = X_E} \Rightarrow X_E - 64 = 3$$

$$X_{IBM} = (-1)^0 \cdot 16^3 \cdot 0,00011101001100001011 =$$

$$= + 11 + 0 + 00 + 1, 00001011. \Leftrightarrow$$

$$X_{10} = +467,04296875_{10}$$

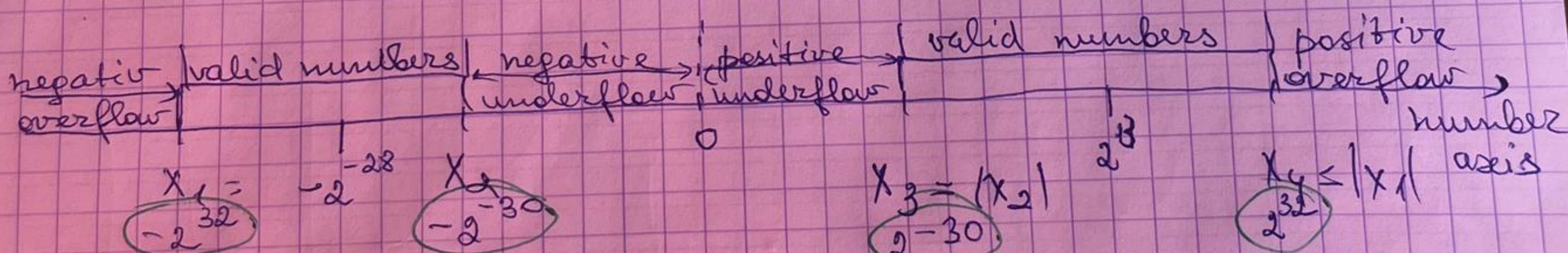
e) Format ipotetic



- sign = 0, pentru numere ≥ 0
 \ 1, pentru numere < 0

- exp.
- 8 biți.
- bias = $2^5 - 1 = 31$
- poate avea valori de la 1 la 63
- 0 și 63 sunt speciale
 - ↓ denorm
 - ↓ NaN

- mantisa \rightarrow normalizarea conduce la "hidder bit"



$$x_1 = [1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1]$$

$$x_1 = (-1)^1 \cdot 2^{62-31} \cdot \left(1 + \frac{1}{2} + \frac{1}{4} + \dots + \frac{1}{2^8}\right) = -2^{31} \cdot \frac{512}{256} = -2^{31}$$

$$= -2^{32} = -10^{9,6}$$

$$X_2 = 10000010000000$$

$$x_2 = (-1)^1 \cdot 2^{1-31} \cdot (1 + 0 + 0 + 0 + 0 + 0) = -2^{-30} = -10^{-9}$$

$$\begin{array}{r} 10 \dots 3 \\ - 30 \dots x \\ \hline x = -9 \end{array}$$

$$\begin{array}{r} 10 \dots 3 \\ 32 \dots x \\ \hline x = 9,6 \end{array}$$