

Subiect 2

Aline Brinze
Tufe, an I.

$$X_{\text{hex}} = 43 + 030B0$$

$$X_{\text{hex}} = X_2 = \frac{X_3 \quad X_E}{0100001100011101001100001011}$$

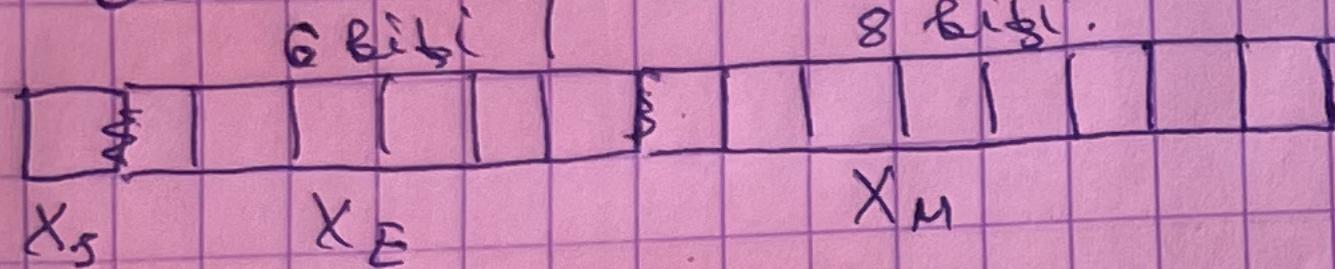
$$67 = X_E \Rightarrow X_E - 64 = 3$$

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

$$= +111010011,00001011 \Leftrightarrow$$

$$X_{10} = +467,04296875 \text{ 10.}$$

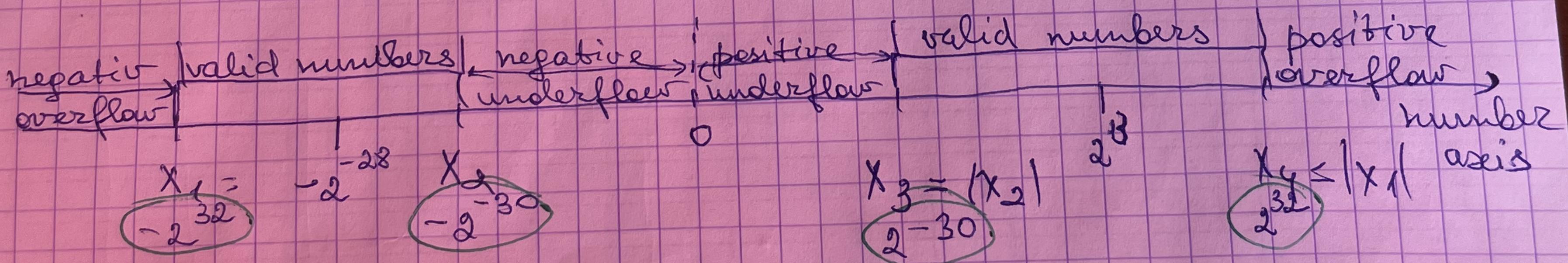
1) Format ipotetic



- sign - 0, pentru numere > 0
- \ 1, pentru numere < 0

- exp. - 6 bici.
- bias $= 2^5 - 1 = 31$
- poate avea valori de la 1 la 63
- 0 și 63 sunt speciale
- \ \ down down
- denomin NaN

- mantisa \rightarrow normalizare conduce la "hidden bit"



$$X_1 = [1 \ 1 \ 1 \ 1 \ 0 \ 1 \ 1 \ 1 \ 1 \ 1 \ 1 \ 1]$$

$$X_1 = (-1)^1 \cdot 2^{62-31} \cdot (1 + \frac{1}{2} + \frac{1}{4} + \dots + \frac{1}{2^8}) = -2^{31} \cdot \frac{512}{256} \approx -10^{3,6}$$

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

$$X_2 = [1 \ 0 \ 0 \ 0 \ 0 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0]$$

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

$$X_2 = (-1)^1 \cdot 2^{1-31} \cdot (1 + 0 + 0 + 0 + \dots + 0) = -2^{-30} = -10^{-9}$$

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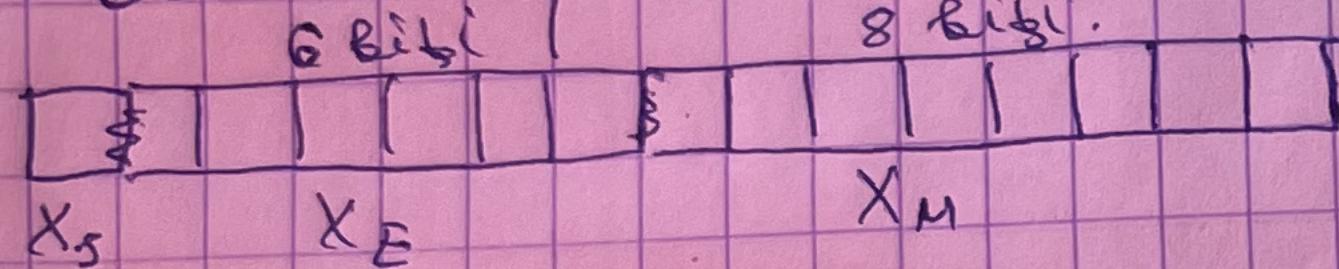
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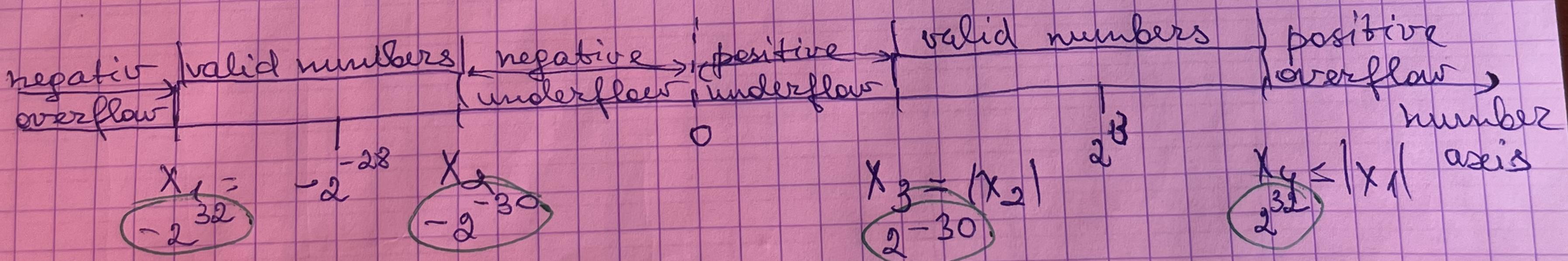
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