

# Recapitulare Booth

$\underbrace{x}_{\text{multiplicand}} * \underbrace{y}_{\text{multiplier}}$

$$y: y_{n-1} y_{n-2} \dots y_1 y_0$$

$$y = y_{n-1} y_{n-2} \dots y_1 y_0 \vdots \overset{0}{\underset{-1}{y_{-1}}}$$

$y_i$	$y_{i-1}$	OP	
0	0	0	
0	1	1	adunare
1	0	$\overline{1}$	scădere
1	1	0	

$$y_{i-1} - y_i \begin{cases} 0 \\ 1 \\ \overline{1} \\ 1 \end{cases}$$

$$i=0 \quad (y_{-1} - y_0) \times 2^0 \times x +$$

$$i=1 \quad (y_0 - y_1) \times 2^1 \times x$$

$$i=2 \quad (y_1 - y_2) \times 2^2 \times x$$

— — — — —

$$i=n-1 \quad (y_{n-2} - y_{n-1}) \times 2^{n-1} \times x$$

$$- \gamma_i \times 2^i + \gamma_i \times 2^{i+1} = \underline{\underline{\gamma_i \times 2^i}}$$

$$P = \left( \sum_{i=0}^{n-2} \gamma_i \times 2^i - \gamma_{n-1} \times 2^{n-1} \right) \times \times$$