

# Recapitulare Booth

$\underbrace{X}_{\text{multiplicand}} \times \underbrace{Y}_{\text{multiplier}}$

$$Y: Y_{n-1} Y_{n-2} \dots Y_1 Y_0$$

$$Y = Y_{n-1} Y_{n-2} \dots Y_1 Y_0 \vdots \overset{0}{\underset{-1}{Y_{-1}}}$$

$Y_i$	$Y_{i-1}$	OP	
0	0	0	
0	1	1	adunare
1	0	$\overline{1}$	scădere
1	1	0	

$$Y_{i-1} - Y_i \begin{cases} 0 \\ 1 \\ \overline{1} \\ 1 \end{cases}$$

$$i=0 \quad (Y_{-1} - Y_0) \times 2^0 \times X +$$

$$i=1 \quad (Y_0 - Y_1) \times 2^1 \times X$$

$$i=2 \quad (Y_1 - Y_2) \times 2^2 \times X$$

— — —

$$i=n-1 \quad (Y_{n-2} - Y_{n-1}) \times 2^{n-1} \times X$$

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

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