













(A)	description	state	statistical weight
	empty promoter		1
	RNA polymerase bound		$\frac{P}{N_{NS}} e^{-\beta \Delta \epsilon_p}$
	active repressor bound		$\frac{R_A}{N_{NS}} e^{-\beta \Delta \epsilon_{RA}}$
	inactive repressor bound		$\frac{R_I}{N_{NS}} e^{-\beta \Delta \epsilon_{RI}}$

(B)	active		inactive	
	state	statistical weight	state	statistical weight
		1		$e^{-\beta \Delta \epsilon_{AI}}$
		$\frac{c}{K_A}$		$e^{-\beta \Delta \epsilon_{AI}} \frac{c}{K_I}$
		$\frac{c}{K_A}$		$e^{-\beta \Delta \epsilon_{AI}} \frac{c}{K_I}$
		$\left(\frac{c}{K_A}\right)^2$		$e^{-\beta \Delta \epsilon_{AI}} \left(\frac{c}{K_I}\right)^2$
	$\sum_{\text{active}} w_a = \left(1 + \frac{c}{K_A}\right)^2$		$\sum_{\text{inactive}} w_i = e^{-\beta \Delta \epsilon_{AI}} \left(1 + \frac{c}{K_I}\right)^2$	