FÓRMULAS PARA INVENTARIOS DETERMINÍSTICOS

Ecuación general: CT = C1 + C2 + C3 + C4; CT = $C_o + nC_4$

MODELO 1 (C_1 C_3)

ENFOQUE TABULAR			
$C1 = \frac{q}{2} \times C_1$	$C3 = \frac{n}{q} \times C_3$	$N_O = \frac{n}{q}$	$C_o = C1 + C3$

CASO 1: UNIDADES CONTINUAS				
$q_O = \sqrt{\frac{2\,n\,c_3}{c_1}}$	$t_O = \frac{q_O}{n}$	$N_O = \frac{n}{q_O}$	$c_o = \frac{q_o}{2} \times C_1 + \frac{n}{q_o} \times C_3$ ó $c_O = \sqrt{2\,n\,c_1\,c_3}$	$q_r = \frac{q_o \times t_r}{t_o}$

CASO 2: UNIDADES DISCRETAS			
$q_o(q_o - \mu) \le \frac{2nC_3}{C_1} \le q_o(q_o + \mu)$	$c_o = \frac{q_o}{2} \times C_1 + \frac{n}{q_o} \times C_3$	$t_O = \frac{q_o}{n}$	$N_O = \frac{n}{q_o}$

MODELO 2 (C_1 C_2)

CASO 1: UNIDADES CONTINUAS			
$q_o = n\,t_o$	$S_o = q_o \times \frac{C_2}{C_1 + C_2}$	$s = q_o - S_o$	$C_o = \frac{1}{2} q_o \frac{C_1 C_2}{C_1 + C_2}$

CASO 2: UNIDADES DISCRETAS			
$S_o - \frac{\mu}{2} \le q_o \frac{C_2}{C_1 + C_2} \le S_o + \frac{\mu}{2}$	$q_o = n\,t_o$	$s = q_o - S_o$	$C_o = \frac{1}{2} q_o \frac{C_1 C_2}{C_1 + C_2}$

MODELO 3 (C_1 C_2 C_3)

CASO 1: UNIDADES CONTINUAS			
$q_o = \sqrt{\dfrac{2\,n\,c_3(c_1+c_2)}{c_1 c_2}}$	$S = \sqrt{\dfrac{2\,n\,c_2 c_3}{c_1(c_1+c_2)}} = q_o \dfrac{c_2}{c_1+c_2}$	$s = q - S$ ó $s = \sqrt{\dfrac{2\,n\,c_1 c_3}{c_2(c_1+c_2)}}$	$N_O = \dfrac{n}{q_O}$
$t_o = \dfrac{q_O}{n} = \sqrt{\dfrac{2\,c_3(c_1+c_2)}{n c_1 c_2}}$	$c_o = \sqrt{\dfrac{2\,n\,c_1 c_2 c_3}{c_1+c_2}}$ ó $c_o = \dfrac{s}{2} * c_2 + \dfrac{n}{q_o} * c_3$		$t_s = \dfrac{s * t_o}{q_o}$
CASO 2: UNIDADES DISCRETAS			
$S_o - \dfrac{\mu}{2} \leq q_o \dfrac{c_2}{c_1+c_2} \leq S_o + \dfrac{\mu}{2}$		$S_o - \dfrac{\mu}{2} \leq \sqrt{\dfrac{2nC_3}{C_1} \times \dfrac{c_2}{c_1+c_2}} \leq S_o + \dfrac{\mu}{2}$	
$s = q_o - S_o$	$C_o = \dfrac{s}{2} \times C_2 + \dfrac{n}{q_o} \times C_3$	$t_o = \dfrac{q_o}{n}$	$N_O = \dfrac{n}{q_O}$

MODELOS CON DESCUENTO

Análisis sin descuento		
$q_o = \sqrt{\dfrac{2nC_3}{C_1}}$	$Q_0 = \sqrt{\dfrac{2NC_3}{C_1}}$	$C_T = C1 + C3 + C4$
$C_T = \dfrac{q_o}{2} \times C_1 + \dfrac{n}{q_o} \times C_3 + nC_4$		$C_T = \dfrac{Q_0}{2} \times C_1 + \dfrac{N}{Q_0} \times C_3 + N$
Análisis con descuento		
$C_4' = C_4(1-d)$	$N' = N(1-d)$	$N_o' = \dfrac{N'}{Q'}$
$C_T' = \dfrac{q'}{2} \times C_1' + \dfrac{n}{q'} \times C_3 + nC_4'$		$C_T' = \dfrac{Q'}{2} \times C_1 + \dfrac{N'}{Q'} \times C_3 + N'$

PRODUCCIÓN PARA EXISTENCIAS

$q_O = \sqrt{\dfrac{2nC_3}{C_1\left(1-\frac{n}{k}\right)}}$	$t_O = \sqrt{\dfrac{2C_3}{n\,C_1\left(1-\frac{n}{k}\right)}} = \dfrac{q_o}{n}$
$S_O = q_O\left(1-\frac{n}{K}\right)$	$N_O = \dfrac{n}{q_O}$
$C_T = \dfrac{q_o}{2} \times C_1 + \dfrac{n}{q_o} \times C_3 + nC_4$	$t_m = \dfrac{q_O}{K}$