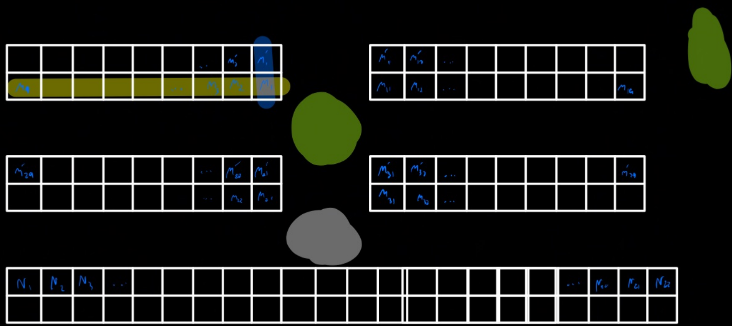
นิยาม Messy point vs Corner



$$= m_1 m_1' (m_1 + m_1') + m_1 m_2 (m_1 + m_2 + \dots)$$

$$+ m_{11} m_{11}' (m_{11} + m_{11}') + m_{11} m_{12} (m_{11} + m_{12} + \dots)$$

$$+ m_{31}' m_{31} (m_{31} + m_{31}') + m_{31}' m_{32}' (m_{31}' + m_{32}' + \dots)$$

$$+ m_{21}' m_{21} (m_{21} + m_{21}') + m_{21}' m_{22}' (m_{21}' + m_{22}' + \dots)$$

$$= \left(M_{21} + M'_{21}\right)\left(M_{21}\, M'_{21}\right)$$

$$+ \left(M_{31} + M'_{31}\right)\left(M_{37}\, M'_{37}\right)$$

$$+ \left(M_{21} + \dots + M_{29}\right)\left(M_{21}\, M_{22}\right)$$

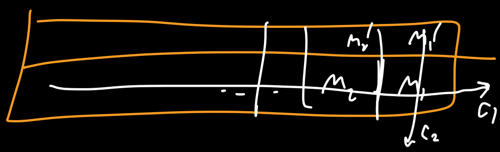
$$+ \left(M_{31} + \dots + M_{3a}\right)\left(M_{31}\, M_{32}\right)$$

$$+ N_{11} N_{1a} \left(N_{6} + N_{9} + \dots + N_{1}\right).$$

$$+ N_{11} N_{12} \left(N_{17} + N_{12} + \dots + N_{22}\right).$$

ต่อไปจะ prove ว่า model ดี

ได้ ว่า messy ของ corner มาจาก



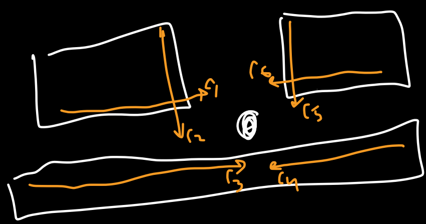
พิจารณา ว่า messy ของ

walk way c_1 ให้เป็น p_1

$m_1 m_2 + m_1 m_2 m_3 + \dots$

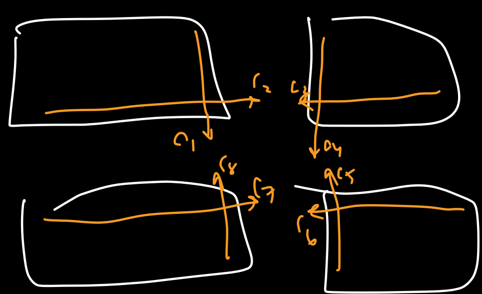
ให้ $c_1 = m_1 m_2 (m_1 + m_2 + \dots)$

$c_2 = m_1 m_1' (m_1 + m_1')$.



∴ messy path @ corner

$\equiv c_1 + c_2 + c_3 + c_4 + c_5 + c_6$.



∴ messy path @ corner

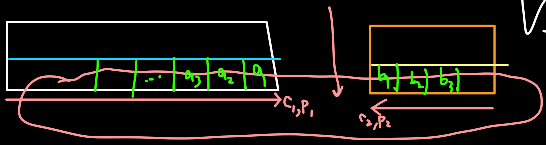
$\equiv c_1 + c_2 + c_3 + \dots + c_8$.

$p \Rightarrow$ walk way

$c \Rightarrow$ corner

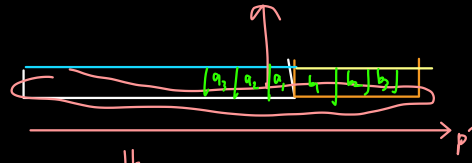
พิจารณา

ความชื้นวายจาก



VS

ความชื้นวายจาก



walk way

$p' = a_2 a_1 b_1 +$

$a_1 a_2 a_3 + a_2 a_3 a_4 + \dots$

$a_1 b_1 b_2 +$

$b_1 b_2 b_3 + b_2 b_3 + b_4 + \dots$

ได้ $c_1 = a_1 a_2 (a_1 + a_2 + \dots)$

$p_1 = a_1 a_2 + a_1 a_2 a_3 + \dots$

$c_2 = b_1 b_2 (b_1 + b_2 + \dots)$

$p_2 = b_1 b_2 + b_1 b_2 b_3 + \dots$

Q: prove ว่า $c_1 + p_1 + c_2 + p_2 > p'$

$\Leftrightarrow \quad c_1 + c_2 > a_2 a_1 b_1 + a_1 b_1 b_2$

จะแสดงว่า $a_1 a_2 (a_1 + a_2 + \dots) > a_1 a_2 b_1$

$\Leftrightarrow \quad a_1 + a_2 + \dots > b_1$

$a_1 + a_2 + \dots > a_1 + a_2 > 2 > b_1$

ดก messy point $\in (0,1)$.