

# Lab #2

$$Y_2 = \overline{A_7} \overline{A_6} \overline{A_5} A_4 + \overline{A_7} \overline{A_6} A_5 + \overline{A_7} A_6 + A_7$$

$$Y_2 = \overline{A_7} \overline{A_6} (\overline{A_5} A_4 + A_5) + \overline{A_7} A_6 + A_7 \Rightarrow A + \overline{A}B = A + B$$

$$\overline{A_7} \overline{A_6} A_4 + \overline{A_7} \overline{A_6} A_5 + \overline{A_7} A_6 + A_7$$

$$\overline{A_7} \overline{A_6} (A_4 + A_5) + \overline{A_7} A_6 + A_7$$

$$\overline{A_7} (\overline{A_6} (A_4 + A_5) + A_6) + A_7$$

$$\overline{A_7} (\overline{A_6} + (A_4 + A_5)) + A_7$$

$$Y_2 = A_7 + A_6 + A_5 + A_4$$

$$Y_1 = \overline{A_7} \overline{A_6} \overline{A_5} \overline{A_4} \overline{A_3} A_2 + \overline{A_7} \overline{A_6} \overline{A_5} \overline{A_4} A_3 + \overline{A_7} A_6 + A_7$$

$$\overline{A_7} \overline{A_6} \overline{A_5} \overline{A_4} (\overline{A_3} A_2 + A_3) + \overline{A_7} A_6 + A_7$$

$$\overline{A_7} \overline{A_6} \overline{A_5} \overline{A_4} (A_3 + A_2) + \overline{A_7} A_6 + A_7$$

$$\overline{A_7} (\overline{A_6} \overline{A_5} \overline{A_4} (A_3 + A_2) + A_6) + A_7$$

$$\overline{A_7} (A_6 + \overline{A_5} \overline{A_4} (A_3 + A_2)) + A_7$$

$$Y_1 = A_7 + A_6 + \overline{A_5} \overline{A_4} (A_3 + A_2)$$

$$A_7 + A_6 + \overline{A_5} \overline{A_4} A_3 + \overline{A_5} \overline{A_4} A_2$$

$$Y_0 = \overline{A_7} \overline{A_6} \overline{A_5} \overline{A_4} \overline{A_3} \overline{A_2} A_1 + \overline{A_7} \overline{A_6} \overline{A_5} \overline{A_4} A_3 + \overline{A_7} \overline{A_6} A_5 + A_7$$

$$\overline{A_7} \overline{A_6} \overline{A_5} \overline{A_4} (\overline{A_3} \overline{A_2} A_1 + A_3) + \overline{A_7} \overline{A_6} A_5 + A_7$$

$$\overline{A_7} \overline{A_6} \overline{A_5} \overline{A_4} (\overline{A_2} A_1 + A_3) + \overline{A_7} \overline{A_6} A_5 + A_7$$

$$\overline{A_7} \overline{A_6} (\overline{A_5} \overline{A_4} (\overline{A_2} A_1 + A_3) + A_5) + A_7$$

$$\overline{A_7} \overline{A_6} (\overline{A_4} (\overline{A_2} A_1 + A_3) + A_5) + A_7 \Rightarrow Y_0 = \overline{A_6} (\overline{A_4} (\overline{A_2} A_1 + A_3) + A_5) + A_7$$