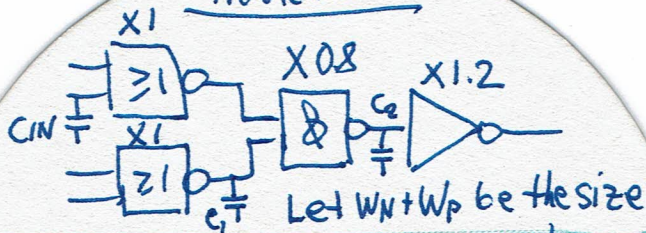


I just had to check if I could solve the problem on a coaster.

It was tight. . . .

Problem 3

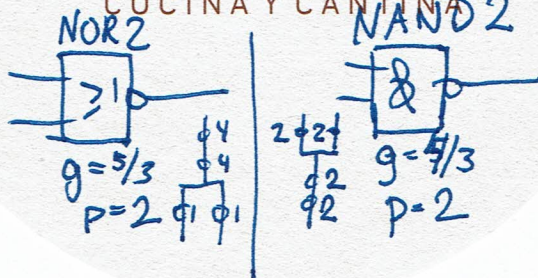


$$C_1 = 0.8 C_{IN}$$

$$C_2 = 1.2 C_{IN}$$

Hacienda

COCINA Y CANTINA



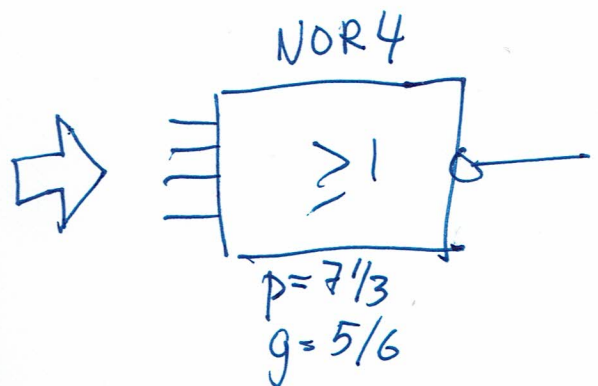
a) Normalized delay

$$d = \sum p + g_{NOR} \times \frac{0.8}{1} + g_{NAND} \times \frac{1.2}{0.8} + \frac{C_L}{1.2 C_{IN}}$$

$$= 5 + \frac{5}{3} \times \frac{4}{5} + \frac{4}{3} \times \frac{3}{2} + \frac{1}{1.2} \times \frac{C_L}{C_{IN}}$$

$$p = 7\frac{1}{3}$$

$$g = 5\frac{5}{6}$$



b) Path effort $F = 6HB = \frac{5}{3} \times \frac{4}{3} \times \frac{144}{5}$

$$F = 64 \rightarrow f = 4$$

$$h = \frac{f}{g} \rightarrow h_1 = \frac{4}{5/3} = 2.4; h_2 = \frac{4}{4/3} = 3$$

NAND: 2.4X; INV: 7.2X

check: $\frac{28.8}{7.2} = 4 = OK!$

