

# ENEL 353 Tutorial

October 15, 2019

Solution to Exercise 7, written after the tutorial period.

$$C_{OUT}(A, B, C_{IN})$$

	AB			
$C_{IN}$	00	01	11	10
0			1*	
1		1*	1	1*

$$C_{OUT} = AB + BC_{IN} + AC_{IN}$$

$$S(A, B, C)$$

	AB			
$C_{IN}$	00	01	11	10
0		1*		1*
1	1*		1*	

This is a worst-case scenario for SOP minimization. It's not possible to simplify canonical SOP at all!

$$S = \bar{A}\bar{B}C_{IN} + \bar{A}B\bar{C}_{IN} + ABC_{IN} + A\bar{B}\bar{C}_{IN}$$