

# Class Exercise—Minimizing Multi-Output Boolean Functions

10/19/15

Consider the following set of Boolean functions:

$$f_1(x, y, z) = \sum m(0, 2, 3, 4, 6)$$

$$f_2(x, y, z) = \sum m(0, 2, 5)$$

$$f_3(x, y, z) = \sum m(3, 4, 5, 6)$$

1. Use Quine-McCluskey to determine the tagged multiple-output prime implicants of  $f_1, f_2, f_3$ .

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2. Given the tagged multiple-output prime implicants of  $f_1, f_2, f_3$  from Problem #1, use Table reduction techniques to obtain a multiple-output minimal sum for  $f_1, f_2, f_3$ .