

CMPSCI 145 Homework
Professor William T. Verts

The grids below are for 4-bit integer arithmetic, both unsigned (0...15) and two's complement signed (-8...+7). For every one of the 256 cells in each grid, mark cells with a • if the corresponding computation is valid, with a + if the computation exhibits overflow (a value greater than the largest value possible), with a - if the computation exhibits underflow (a value less than the smallest value possible), and with an × if the computation fails (such as when dividing by zero). Leave no cell empty. You will be told separately what mathematical operation to apply in each problem set.

PROBLEM SET #1:

UNSIGNED

SIGNED

PROBLEM SET #2: _____

UNSIGNED

SIGNED