

Homework Assignment 3

1. Page 153 describe the problem of **peasant multiplication**.
 - a. Write a recursive algorithm for the multiplication operation $\text{mult}(n, m)$.
 - b. Write an iterative (non-recursive) algorithm. You will likely need a third variable to keep track of the sum and how it changes every time an odd n is encountered.
2. Exercise 5.1.5 from page 175.
3. Place the letters of word ALGORITHM in a search tree (insert them one at a time, don't try to balance it). Then write out the order of vertices for each of the three traversals (in-order, pre-order, post-order).