This project asks you to investigate m-ary trees.

(a) At most, how many vertices does an m-ary tree of height h have? (In terms of m and h.)

(b) Using Theorem 4 in the text, how many leaves does such a tree have? (Simplify your answer.)

(c) There are three non-isomorphic full 3-ary trees of height two. Draw them. How many leaves does each of them have?

(d) How many leaves would you conjecture that a full 6-ary tree of height two could have? Give all of the answers.

(e) There are seven non-isomorphic full 2-ary trees of height three. Draw them.