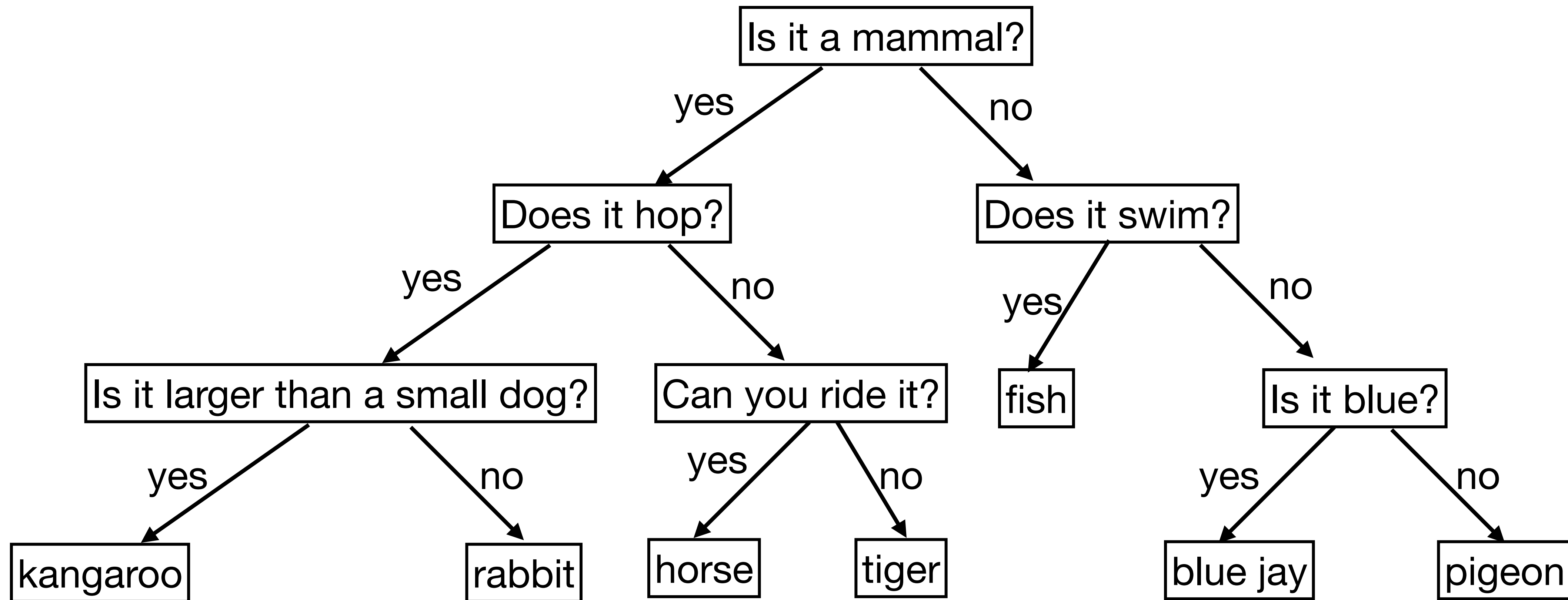# Lab 12: Introduction to Decision Trees

MAT 328, Spring 2021
Lehman College

What is a decision tree?

The *maximum depth* of the tree is the maximum number of levels from the top (root) to a bottom tip (leaf), not including the root.
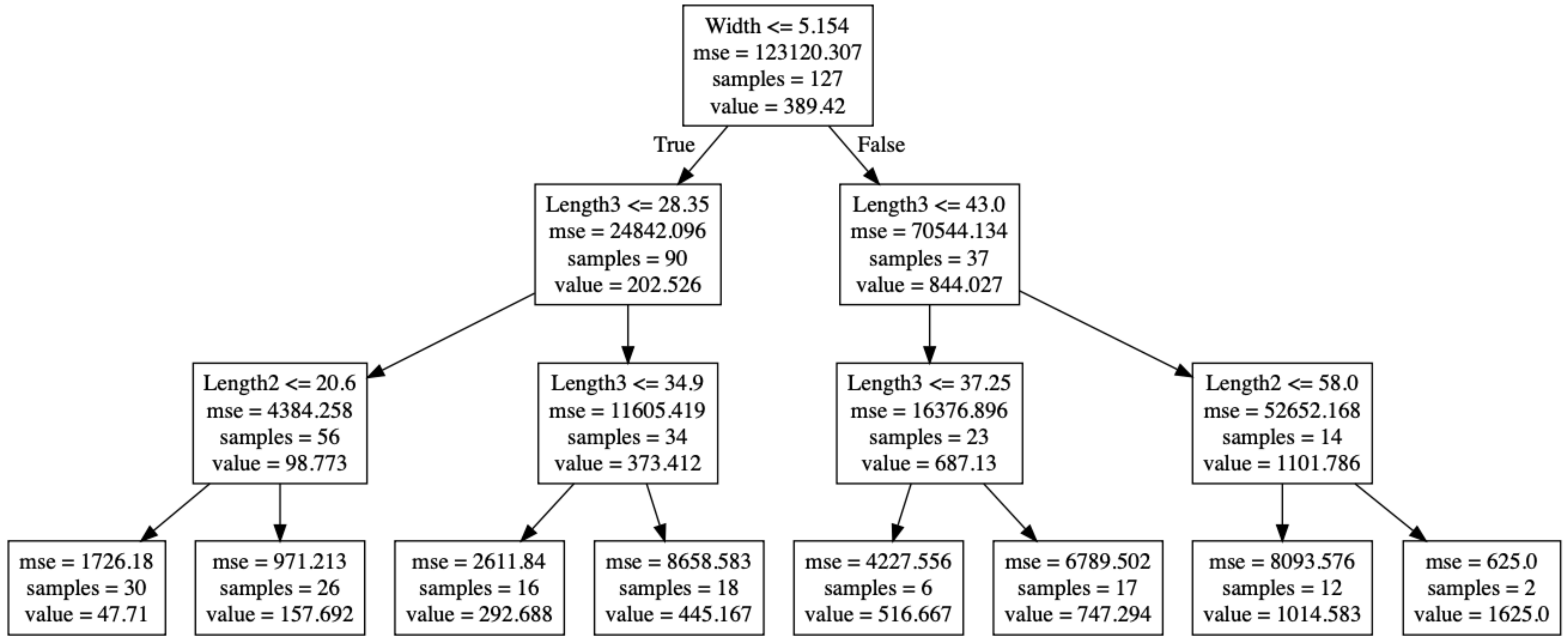This tree has a maximum depth of 3.

Fish Market Data

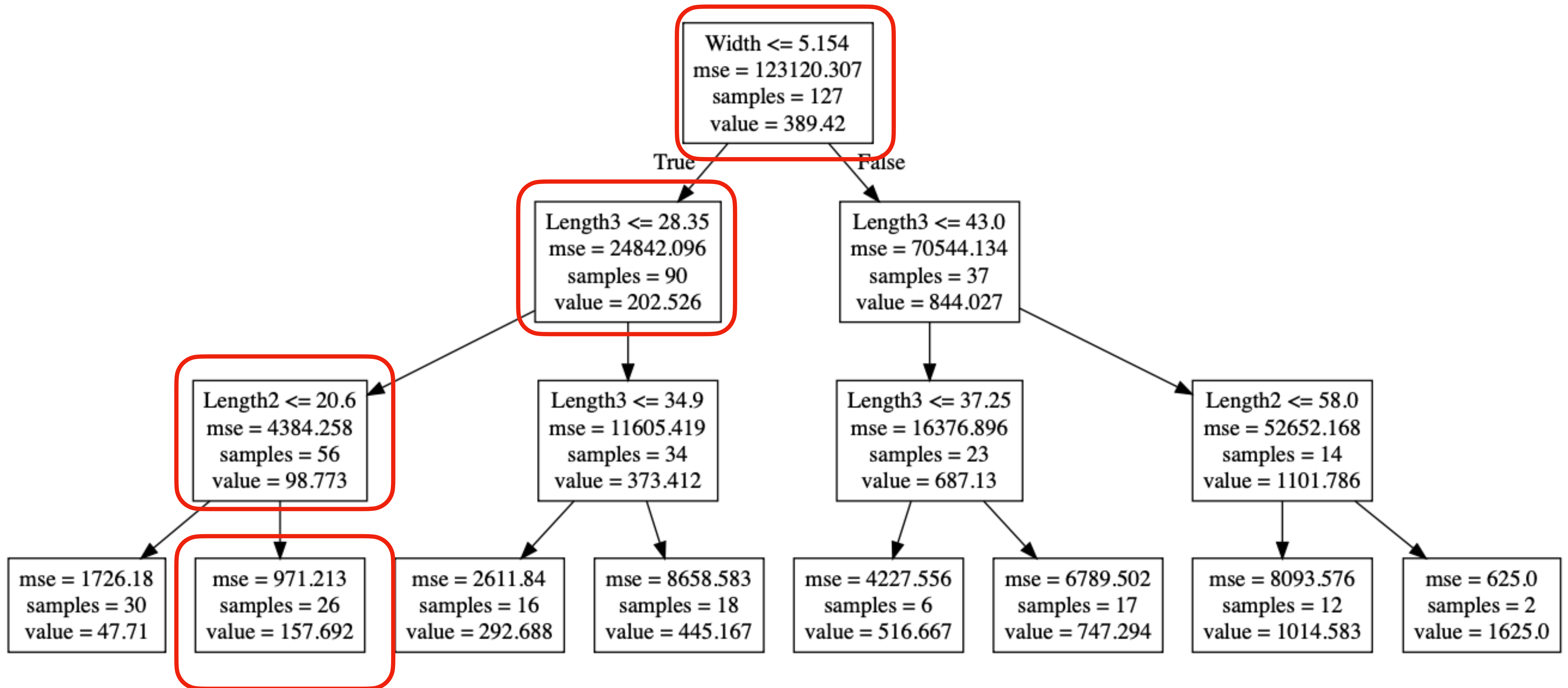|	Species	Weight	Length1	Length2	Length3	Height	Width
48	Roach	169.0	22.0	24.0	27.2	7.5344	3.8352
21	Bream	685.0	31.4	34.0	39.2	15.9936	5.3704
42	Roach	120.0	19.4	21.0	23.7	6.1146	3.2943
123	Perch	1100.0	39.0	42.0	44.6	12.8002	6.8684
1	Bream	290.0	24.0	26.3	31.2	12.4800	4.3056

y

x

Goal: Predict weight using Length1, Length2, Length3, Height, and Width

Fish Market Decision Tree

Fish Market Decision Tree

How much does a fish with a width of 4in, a length 2 of 25cm and a length 3 of 27cm weigh?