a) How many levels are there in the decision tree?

- There are 4 levels

b) What is the default class label associated with each vertex?

- Level 1, Vertex 1: Default class label is Setosa
- Level 1, Vertex 2: Default class label is Versicolor
- Level 2, Vertex 1: Default class label is Versicolor
- Level 2, Vertex 2: Default class label is Virginica
- Level 3, Vertex 1: Default class label is Versicolor
- Level 3, Vertex 2: Default class label is Virginica

c) Starting from the root note, what is the name of the first attribute used for a decision, and what are the split points?

- Level 1, split on attribute: Petal Length
- Split points: < 2.5 left subtree (setosa), >= 2.5 right subtree (versicolor)
- Level 2, split on attribute: Petal Width
- Split points: < 1.8 left subtree (versicolor), >= 1.8 right subtree (virginica)
- Level 3, split on attribute: Petal Length
- Split points: < 5 left subtree (versicolor), >= 5 right subtree (virginica)

d) Each vertex has three lines.

- i) **At each vertex, what do the three numbers in the middle line signify?**
  Each line shows the probability of having one of the three plants according to their characteristics. In the root node we see a split of 0.33 0.33 0.33. This means that the probability for each of the 3 plants is ⅓ (equal).
- ii) **At each vertex, what does the last line signify?**
  It shows the percentage of observations in the node.