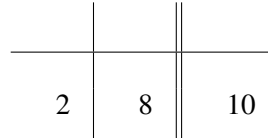Name:

ID#:

Section: 455   or   555

2	8	10

Directions – *The quiz is closed book/notes. You have 10 minutes to complete it; use this paper only.*

Problem 1: Recall (2pts) (Answer in one sentence only.)

Name one reason one might use a decision tree or forest rather than another type of classifier.

Problem 2: Work (8 Points) (Show all derivations/work and explain.)

Given the dataset and decision tree below, calculate the variance impurity and misclassification impurity at the indicated node.

Class label	Feature	Feature
Has cancer?	Age	Smoker?
No	55	No
No	48	No
No	25	Yes
No	18	No
Yes	33	Yes
Yes	74	No
Yes	65	Yes