Worksheet 9   Name:_____
A&S100
15 November 2002

Consider a game of Nim with three piles. The first pile contains 3 pebbles, the second contains 5 pebbles, and the third contains 7 pebbles. There are two players who alternate removing one or more pebbles from exactly one of the piles. For example, Player One might remove 2 pebbles from the first pile. Player Two could then remove 5 pebbles from the third pile.

1. Create a game tree for this game of Nim.

2. Find all safe points in this game of Nim.

3. What is the outcome of the game if both players use optimal strategy?