Mathematics 1550H – Introduction to Probability
TRENT UNIVERSITY, Summer 2015
Assignment #1
Due on Monday, 29 June, 2015.

Losing your marbles?

You are have been condemned to death at the whim of a somewhat whimsical tyrant. The tyrant offers you a chance to survive if you win the following game:

> 50 *black marbles*, 50 *white marbles, and two empty bowls are given to you. You may divide up the* 100 *marbles into the two bowls in any way you like, so long as you use all of the marbles. After this, you are blindfolded and the bowls are placed to your left and right, respectively, in random order. You then choose one of the bowls and remove a single marble from it. If the marble is white you win, but if the marble is black, you lose.*

1. How should you divide up the marbles between the bowls yo have the best chance of winning? *[10]*