Quiz 2

Your NAME:

ID#:

1. (6 pts.) Define recursively the set of all binary strings that end on a zero.

2. (4 pts.) You have a bag with 12 balls in it, 3 of which are white, 4 red, and 5 blue. The balls are indistinguishable in any other way but by their color.

You want to draw at least one red ball from the bag, but it is pitch-dark and you cannot tell the colors of the balls. What is the least number of balls that you have to take out to make sure there is one red among them?

3. (8 pts.) How many binary strings of length n are there that contain the two consecutive characters **01** at least once? Justify. (For example, if $n = 2$, there is only one such string, 01.)