Mini Assignment 3 (Due Nov 19)

Consider a dart board. Distances are marked from the dart board at every 5 feet by a white line. Line 1=5 ft, Line 2=10ft, etc.Players have to stand on these lines and try to hit the bullseye on the board. We will assume that

1. If the player is able to hit the bullseye at Line x, then he/she can also hit the bullseye at any line numbered less than x.
2. If the player misses the bullseye at Line x, then he/she will also miss the bullseye at line numbered greater than x.
3. If you miss, you cannot reuse your dart. However, if you hit the bullseye you can reuse the dart
4. Only hitting the bullseye counts –anything else is a miss

Given that there are k lines and you have 2 darts. What is the **minimum number of trials required** to find the farthest distance from which you can hit the bullseye. Note that we are optimizing the number of trials. [HINT: A very similar problem is available online, you can look it up to modify it according to the requirements of this problem].