

1:

For calculations, I am just using the main bridge and sidewalks. In theory you could put pennies on the structure or lower walkway, but due to lack of information on dimensions it is more reasonable to just use the main road and sidewalk.

Length(including approaches) 2737 m

width  $19\text{m} + 2\text{m} = 21\text{m}$

area = 57477

diameter of penny = 19.5 mm = .00195m

Have to treat penny as a square and not a circle, since the area around it is unusable

so the total is  $57477\text{m} / .00195\text{m} = 29475384.62$ , rounding down so total is

29475384 pennies

2:

144:81

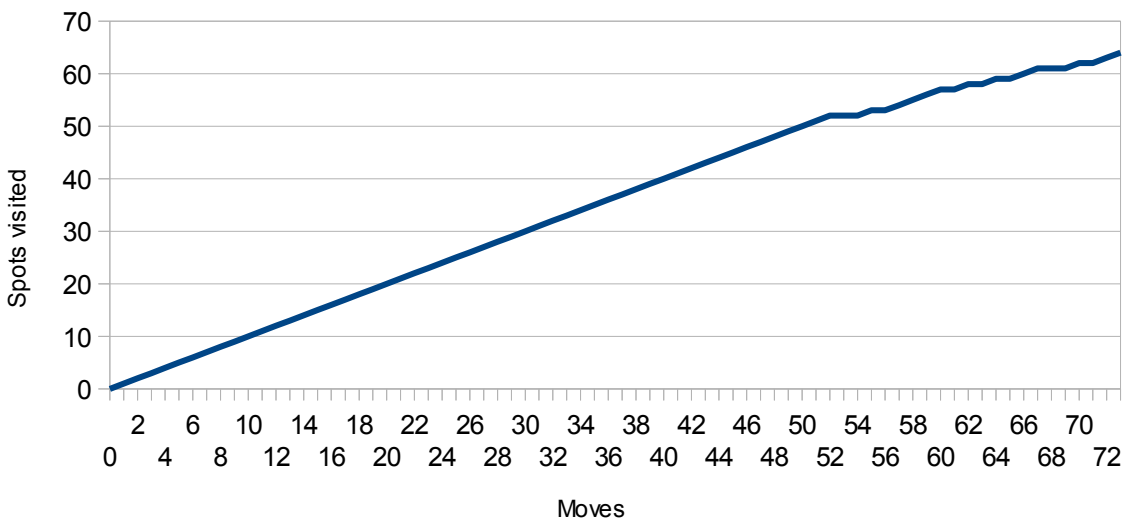
192:108

912:513

3:

Since I didn't have prior knowledge of the number of moves, and that this problem is a variation of a Hamiltonian circuit, an algorithm doesn't exist to solve the exact number in a reasonable amount of time. I used a depth-first search algorithm to attempt to get the lowest number of moves. It got an answer of 72 moves, and produced data for this graph.

Moves vs Number of Places Visited



4:

Working in the video games industry has been a dream of mine for many years. Its the reasoning behind being a software engineering major. Since I am a fan of IGN as well, this seemed like a good challenge to accept. I feel like most engineers that would want to work in the video game industry would want to work on the games side, rather than the journalism side, but for me that may not be the case. I feel like the quality of a game would not be affected by the quality of my work, but rather the

designers ability to convey their ideas into gameplay. So that would make the other side of the industry might be more rewarding for me, since I still will be able to work in the industry and would be able to get fans information about their favorite games. Given the chance I would be thrilled to see the inner workings of a large web system as well as the management of such a system. Even in the short time I would be there, using my skills to help improve IGN for the reader's experience would be a worthwhile effort. If I am able to help the editors that I love listening to and reading from a better platform to give to the audience, it would make this summer kick ass.