**Unit 2 – Activity 4**

**Mini Golf**

Open the following code: <https://tinyurl.com/yaapeyrs>. It contains a simulated game of mini golf. The game consists of nine different holes, but the game will not work until you write a correct next-x function to replace the default-next-x which does nothing.

Since this game consists of only 1-dimensional motion, to make it more challenging each hole is only open for a certain amount of time, so you must use your knowledge of physics to determine what velocity to give the ball. The position of each hole, as well as the times it opens and closes, can be found in the table below.

|  |  |  |  |
| --- | --- | --- | --- |
| **Hole #** | **Position (cm)** | **Time it opens (s)** | **Time it closes (s)** |
| 1 | 200 | 3.5 | 5.5 |
| 2 | 350 | 2.0 | 3.5 |
| 3 | 425 | 3.0 | 4.0 |
| 4 | 575 | 4.0 | 4.5 |
| 5 | 400 | 1.5 | 1.9 |
| 6 | 225 | 2.5 | 2.8 |
| 7 | 150 | 1.0 | 1.3 |
| 8 | 690 | 3.0 | 3.2 |
| 9 | 500 | 0.5 | 0.6 |

Use the table below to keep score. Write how many attempts it took you to make each shot and the initial conditions you used to get the ball in the hole.

|  |  |  |  |
| --- | --- | --- | --- |
| **Hole #** | **Starting Position (cm)** | **Velocity (cm/s)** | **Number of Attempts** |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| 8 |  |  |  |
| 9 |  |  |  |
| **Final Score:** | | |  |