

Computer Game Designer: Linear Equations Putt-Putt

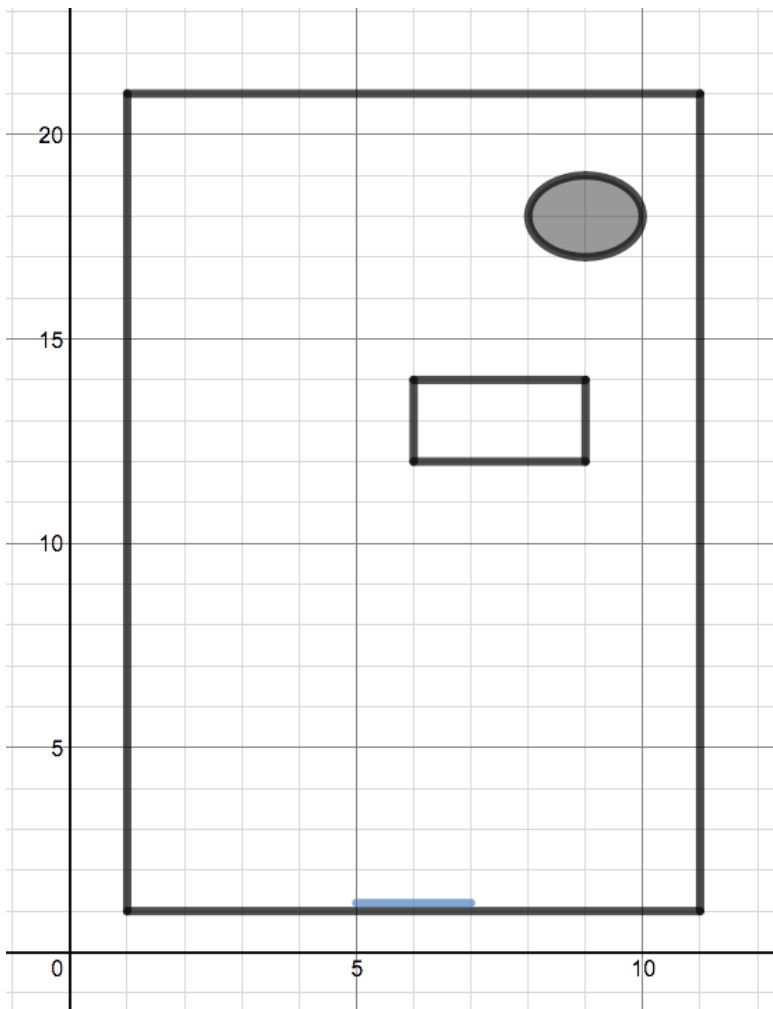
Name: _____

Have you ever played an online video game or a game on your phone? If so you have experienced the user side to a **Video Game Designer's** job: creating an interactive gaming experience using Computer Science, an application of mathematics and engineering. An introductory Video Game Designer's salary is around \$55,000. Computer Science Degrees with a concentration in game design can be earned at NC State University, University of North Carolina Chapel Hill, University of North Carolina Charlotte, and North Carolina A&T.

You have been contracted to beta test a new online game: Linear Equations Putt Putt. The game is relatively simple. Users will select a coordinate point to place their ball on to start the game. They will then click on a location on the putting green to create a line of travel for the ball. Once the ball hits a wall (the boundary of the putting green) it stops and does not continue to move.

Your goal is to complete the course in the indicated Par (that is in the number of strokes indicated on the green. Use your knowledge of linear equations, and creating the equation of a line when given two points, to successfully navigate the 4 holes on this game.

Hole 1: Par 2



First Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

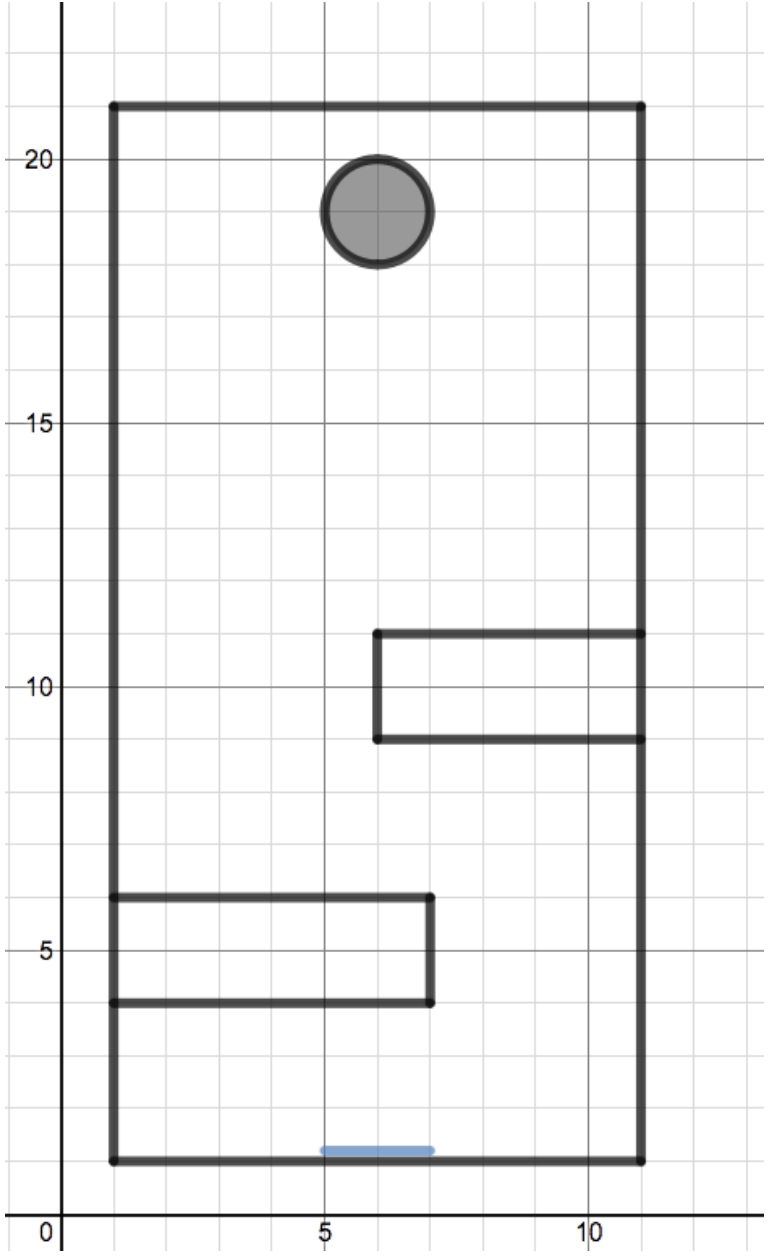
Second Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

Hole 2: Par 3



First Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

Second Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

Third Shot:

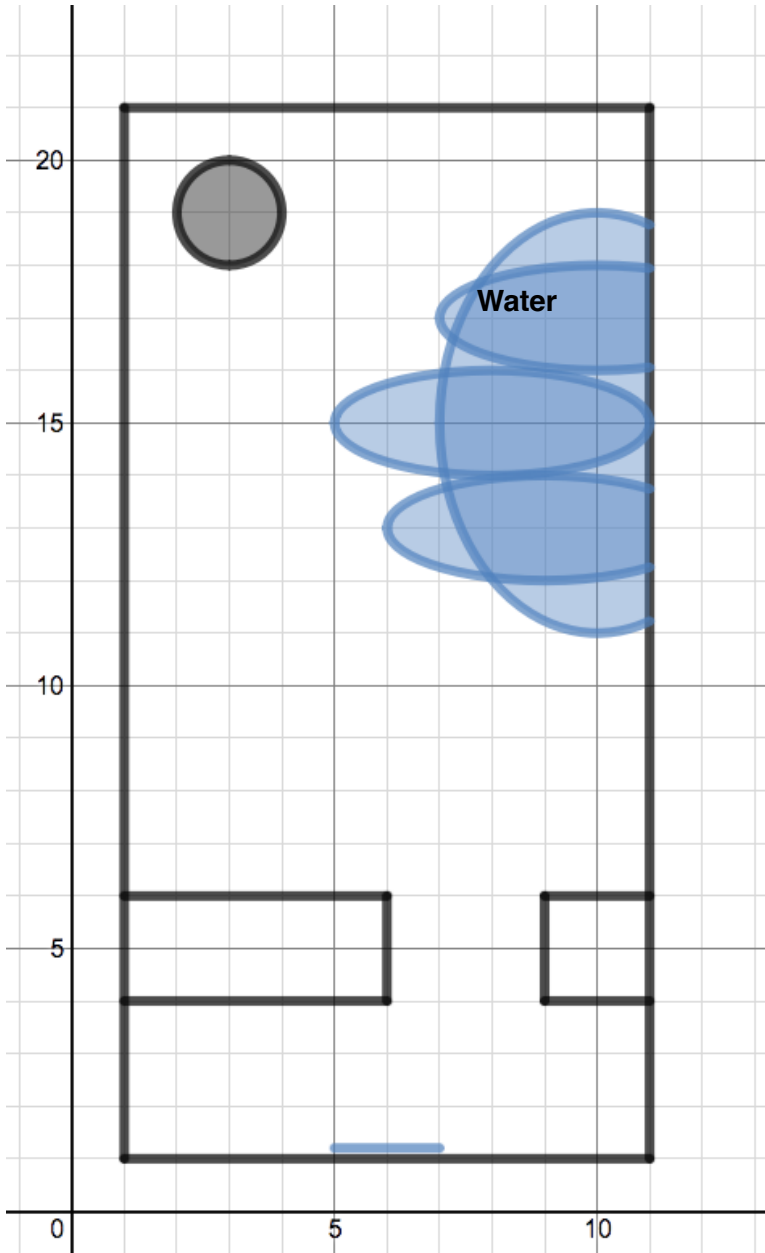
Ball Start: _____

Ball End: _____

Linear Equation: _____

Hole 3: Par 3

This time, you need to select a point in the OPPOSITE direction of travel of the ball to define the line that the ball will take. You will determine when the ball stops traveling by restricting the domain of the linear equation.



First Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

Domain: _____

Second Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

Domain: _____

Third Shot:

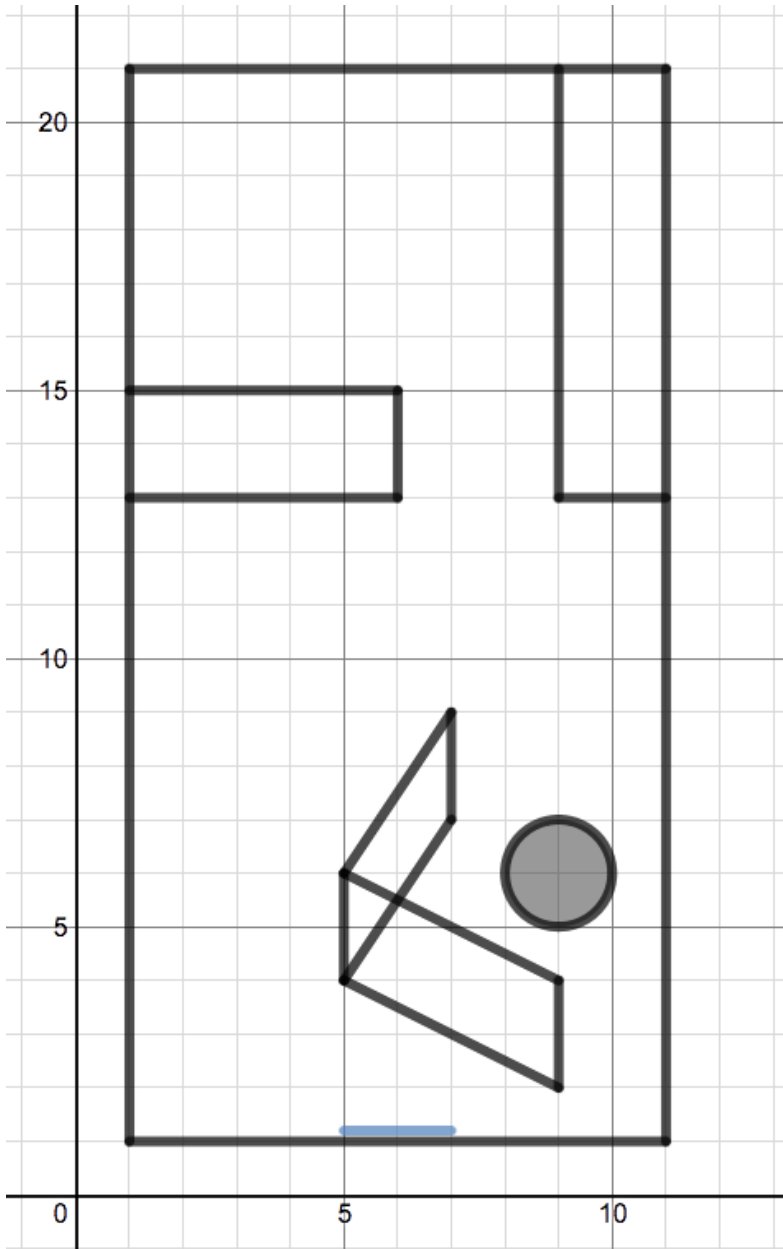
Ball Start: _____

Ball End: _____

Linear Equation: _____

Domain: _____

Hole 4: Par 3



First Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

Domain: _____

Second Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

Domain: _____

Third Shot:

Ball Start: _____

Ball End: _____

Linear Equation: _____

Domain: _____