**Test case explanation:**

**gameOver:**

* Shows that if the tile bag is empty and placing a tile causes a player’s hand to be empty, then the game will end and display the scores and the winner. If the scores are equal, then the game will call a draw.

**placeTile2:**

* Shows that placing a tile next to a segment in which the adjacent tile is valid, but already contains the specified tile, will fail (Y2 at G1). Also shows that placing a tile next to a segment in which the adjacent tile is valid, but the segment’s similarity type is different to the similarity between the specified tile and the adjacent tile, will fail (Y2 at H2).
* Shows that placing a tile between two segments that share a similar tile is invalid (R4 at B3) but placing a tile at the corner of two segments that share a similar tile is fine (R4 at B6). Also shows that placing a tile between two segments that don’t share a similar tile is also fine (Y5 at G4)
* Shows that placing a tile between two segments of different similarity types is invalid (R4 at H6), but placing a tile at the corner of two segments of a different similarity type in fine (R4 at H6)

**Test cases yet to be created:**

**loadGame:**

* Player names do not match specified format
* Score isn’t processed correctly
* Hand does not match the correct format, or exceeds a length of 6
* Board does not match the correct format
* Current player name does not match either player name
* The tile bag is empty

**runGame:**

* Game end condition
* Stalemate condition

**placeTile:**

* Specifying an invalid tile (improper format, does not exist in the player’s hand) or an invalid position fails
* Placing a tile next to one that shares no similarity fails
* Placing a tile next to a duplicate fails
* Placing a tile next to one that only shares one type of similarity succeeds (show both colour and shape successes)
* Placing a tile in a segment adds one to the score for every tile in the segment (including the tile itself)
* Placing a tile as part of two segments adds to the score for every tile in each segment, plus an extra point for the tile itself (2 in total)
* Creating a qwirkle results in 6 bonus points and "QWIRKLE!!!" being printed to the screen

**replaceTile:**

* Attempting to replace a tile that doesn’t exist in the player’s hand will fail
* Attempting to replace a tile that does exist in the player’s hand will succeed
* Attempting to replace a tile while the tile bag is empty will fail

**Everything else:**

* getInput, boardToString and displayGameState are all tested implicitly in other test cases, we will display the fact that newGame and saveGame work on the day.