

## **Test cases**

### **A. Placeholder**

1. Adding a placeholder that exceeds the maximum column size of the puzzle.
2. Defining a placeholder for a nonexistent row.
3. Define a placeholder for a nonexistent word (size of placeholder and length on none of the word matches).
4. Adding the existing (Duplicate) placeholder.
5. Define a non-integer placeholder.
6. Define the value of placeholder with direction as h (for horizontal) or v (for vertical).
7. Define a placeholder for non-existing column.
8. Define a placeholder for a nonexistent row and column combination.
9. Providing a valid placeholder.
10. Proving placeholder for a valid row column and length of the existing word.

### **B. Puzzle**

11. Define a non-integer row and column of the puzzle.
12. Providing a puzzle with no solution. Return false
13. Define a puzzle where the words don't have a common letter (the intersection letter).
14. Provide a puzzle with a valid solution. Return true

### **C. Words**

15. Adding a valid single word.
16. Adding existing (Duplicate) word.
17. Define multiple words in the same line.
18. Defining a word for a nonexistent placeholder.
19. Define a word whose length exceeds the maximum length of the puzzle.
20. Define words in different case (uppercase, lowercase etc.)