Objectives:
- Students will be able to fix a broken game that contains multiple broadcasts, more than 1 level, and a tallied point system.

Idaho Computer Science Standard:
- Create, Analyze, and Modify control structures to create programming solutions. (G 6-8)
- Use debugging and testing to improve program quality. (G 6-8)

Overview:
       Currently in the game, Brick Breaker, when you start the game the ball bounces straight up and down. This makes it impossible to progress to level 2 and to eventually beat the game. You have also determined that there is a problem with your broadcast system. Your goal is to fix what is broken and make the game work.

Goals:
- Stop the ball from bouncing just up and down, give it some variety and randomness.
- Fix the broken broadcast system.

Instructions:
1. Find the "When Clicked" game start location in the code, and then follow the code until you reach the starting balls location.
2. The Ball is initially pointing up (0 degrees). This is the direction that the ball will go once the game is started. Change this direction so that it becomes random. (10 points)
3. Test your new program. While it does work, it now only bounces in a repeated pattern. We need to introduce new random elements.
4. Locate "If touching paddle then" and change the "turn 180 degrees" to something more random. (10 points)
5. Test your new program. While it does work, it now only bounces randomly from the paddle, we also want it to bounce randomly from the bricks. We need to introduce newer random elements.
6. Follow the code and find where the ball receives instructions to move after hitting a block.
7. Change the "turn 180 degrees" into something more random. (10 points)
8. Test your new program, and progress it to level 2.
9. Ahhh. Another error. Some of the broadcasts must have messed up here. Locate the mistake and make sure all the broadcasts are going where they are supposed to. Also check to make sure that all broadcasts are sending the right message. Remember, with each level we should have a new set of broadcasts. (20 points)
10. Test your new program, and progress it to level 2.
11. Hmmm. It seems that the bounce has gone back to being just up and down. Make similar corrections to the level 2 part of the code that you had made to the level 1 part of the code. (30 points)
12. Submit your completed and fixed code to Mr. Horikami in Canvas as an attachment under the assignment named Fixed the Broken Brick Breaker.

Reflection Questions to be answered during the completion of the assignment and to be turned in with the completed assignment on Canvas:

1. What is wrong with having the Ball pointing up (0 degrees)?
   (5 points)

2. Why do we want a random bounce direction for when the ball hits the paddle or blocks?
   (5 points)

3. Why do we need a new set of broadcasts for each new level in any game we make?
   (10 points)