**Test Plan**

| **Game Action to be Tested** | **Test Method** | **Expected Outcome.** |
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| Powerup System - random generation | Kill minions using blendy’s bullets | Powerups should be randomly generated on the floor of the map. |
| Powerup System - grape | Move Blendy to pick up grape powerup | Blendy will shoot 12 bullets around it simultaneously for a period of time. |
| Powerup System - protein powder | Move Blendy to pick up protein powder powerup | Blendy will shoot red bullets which move faster (rapid fire). |
| Powerup System - battery | Move Blendy to pick up battery | Blendy’s health will be restored to full health when picked up. |
| Powerup System - lemon | Move Blendy to pick up lemon powerup | Blendy will shoot yellow bullets which are able to get rid of minion armor making them weaker. |
| Powerup System - Blendy interaction | Move Blendy to get any powerup on the floor | The powerup should disappear and Blendy should gain a special ability. |
| AI System - yellow minions | Kill minions to earn score until yellow minions show up | try to stay a desired distance with the player and shoot green bullets with a random cooldown. Need 2 shots to kill. |
| AI System - green minions | Kill minions to earn score until green minions show up | Green minions will walk in random directions and will bounce off the wall. Need 2 shots to kill. |
| AI System - red minions | Kill minions to earn score until red minions show up | Red minions initially chase Blendy, but once Blendy is within its ideal range, it pauses, becomes deeper red, and sprints towards you at high speed. After charging, it enters a cooldown phase, moving at a reduced speed. Need 4 shots to kill. |
| AI System - blue minions | Kill minions to earn score until blue minions show up | it maintains a strategic distance with the player. Once positioned, it takes aim with a deeper blue color, signaling the countdown to a high-velocity, high-damage black bullet shot. Need 1 shot to kill |
| AI System - black minions | Kill minions to earn score until black minions show up | Black minions have high armor and slow move speed. It will protect blue minions, stand in front of them. Need 20 purple bullets/ 4 yellow bullets to kill. |
| AI System - giant minions | Kill minions to earn score until giant minions show up | Giant minions act the same as normal minions, but with high health; killing them will earn a high score. They will also protect other small minions. |
| AI System - cooperative planning. | Keep at least one sniper and tank on the field. | Tank attempts to shield the Sniper from the player based on sniper and player position when possible.  One sniper can be most protected by one tank. |
| Enemies only spawn at left, right, bottom of screen | Observe minion spawn positions | Enemies should only spawn at left, right, bottom of screen, and should not spawn at the top of screen. |
| Animation - 4 directional minion movement | Let minions chase Blendy | 4 directional movement animation should show up when minions are moving. |
| Animation - persistent Blendy direction | Move Blendy at a certain direction and then stop moving | Blendy should still face the last direction he moved. |
| Animation - 8 directional Blendy movement | Move Blendy to 8 directions (top, down, left, right, topleft, topright, downleft, downright) | 8 directional movement animations will show as Blendy moves. |
| Audio - 1000 Score Reached | Kill minions with bullets until score reached 1000 | Background Music should change. |
| Audio - sound effect for Blendy injured | getting shot by minions | When bullets collide with Blendy, sound effects should play. |
| Audio - sound effect for killing minions | Shoot minions to kill them | When minion dies, sound effects should play. |
| Audio - sound effects for protein powder  pickups | Pick up the protein powder on the floor. | When Blendy collides with powerups, different sound effects should play. |
| Audio - sound effects for grape powerup pickups | Pick up the grape on the floor. | When Blendy collides with powerups, different sound effects should play. |
| Audio - sound effects for lemon powerup pickups | Pick up the lemon on the floor. | When Blendy collides with powerups, different sound effects should play. |
| Audio - sound effects for battery pickups | Pick up the battery on the floor. | When Blendy collides with powerups, different sound effects should play. |
| Physics System - Map wall | Move blendy towards the wall on the top | Blendy should not walk off the wall |