Algorithm Comparison – Food-Enemy Game

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| Game Example Term | LPO Problem Equivalent | RL Equivalent |
| HM\_Episodes | Simulate Runs/Depletions | Iterations |
| Enemy\_Penalty (-) | QoI > Limit | Bad Reward |
| Food\_Penalty (+) | QoI ≤ Limit | Good Reward |
| Relative position - movement | Core Output QoI - Input LP Pair | Q-Table (state - action pairs) |
| Movement of player | Changing LP Design | Action |
| 9x9 Grid with 3 characters | Simulate-3 Nodal Code | Environment |
| Current\_q | Current QoI Value and Input LP Pair | Current Q-Value |
| Max\_future\_q | Max Future QoI Value and Input LP Pair | Max Future Q-Value |

**QoI – Quantity of Interest** ex. Fdh or margin-to-limit for Fdh