Slot Reel Design

LInk: <https://docs.google.com/document/d/1g3gRfZ9eHyUUzFHqDlLqZCaUm_qizc8T6N6OT2XDKoY/edit?usp=sharing>

Reel 1

|  |  |
| --- | --- |
| Symbols | Frequency |
|  | 5 |
|  | 4 |
|  | 3 |
|  | 2 |
|  | 1 |
|  | 4 |
|  | 2 |
|  | 2 |
|  | 1 |
|  | 1 |

Reel 2

|  |  |
| --- | --- |
| Symbols | Frequency |
|  | 3 |
|  | 2 |
|  | 1 |
|  | 5 |
|  | 4 |
|  | 1 |
|  | 4 |
|  | 2 |
|  | 2 |
|  | 1 |

Reel 3

|  |  |
| --- | --- |
| Symbols | Frequency |
|  | 1 |
|  | 1 |
|  | 1 |
|  | 1 |
|  | 1 |
|  | 5 |
|  | 5 |
|  | 3 |
|  | 3 |
|  | 4 |

Reel 4

|  |  |
| --- | --- |
| Symbols | Frequency |
|  | 4 |
|  | 5 |
|  | 1 |
|  | 2 |
|  | 3 |
|  | 1 |
|  | 1 |
|  | 4 |
|  | 2 |
|  | 2 |

Reel 5

|  |  |
| --- | --- |
| Symbols | Frequency |
|  | 1 |
|  | 2 |
|  | 3 |
|  | 4 |
|  | 5 |
|  | 2 |
|  | 1 |
|  | 1 |
|  | 4 |
|  | 2 |

**Payout Matrix**

Show your Payout Matrix here. Show all of the winning combinations and what you will pay for them. Add or remove rows as needed.

|  |  |
| --- | --- |
| Winning Combination | Payout |
|  | 25 |
|  | 100 |
|  | 50 |
|  | 50 |
|  | 100 |
|  | 500 |
|  | 500 |
|  | 200 |
|  | 200 |
|  | 1000 |

Return Calculations

Show all of your calculations for the returns. Add them all up to show the Payout Rate of your system. Clearly mark your progressive and bonus game calculations.

**Calculations 1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Chance to Hit REEL 1 | Chance to Hit  REEL 2 | Chance to Hit  REEL 3 | Chance to Hit  REEL 4 | Chance to Hit  REEL 5 |
| Payout 1 | 5/25 = 0.2 | 2/25 =0.08 | 1/25 = 0.04 | 2/25 =0.08 | 5/25 = 0.2 |
| Payout 2 | 1/25 = 0.04 | 3/25 = 0.12 | 1/25 = 0.04 | 1/25 = 0.04 | 4/25 = 0.16 |
| Payout 3 | 2/25 =0.08 | 4/25 = 0.16 | 1/25 = 0.04 | 5/25 = 0.2 | 3/25 = 0.12 |
| Payout 4 | 3/25 = 0.12 | 5/25 = 0.2 | 1/25 = 0.04 | 4/25 = 0.16 | 2/25 =0.08 |
| Payout 5 | 4/25 = 0.16 | 1/25 = 0.04 | 1/25 = 0.04 | 3/25 = 0.12 | 1/25 = 0.04 |
| Payout 6 | 4/25 = 0.16 | 1/25 = 0.04 | 5/25 = 0.2 | 1/25 = 0.04 | 2/25 =0.08 |
| Payout 7 | 2/25 =0.08 | 4/25 = 0.16 | 5/25 = 0.2 | 1/25 = 0.04 | 1/25 = 0.04 |
| Payout 8 | 2/25 =0.08 | 2/25 =0.08 | 3/25 = 0.12 | 4/25 = 0.16 | 1/25 = 0.04 |
| Payout 9 | 1/25 = 0.04 | 2/25 =0.08 | 3/25 = 0.12 | 2/25 =0.08 | 4/25 = 0.16 |
| Payout 10 | 1/25 = 0.04 | 1/25 = 0.04 | 4/25 = 0.16 | 2/25 =0.08 | 2/25 =0.08 |

**Calculations 2**

|  |  |
| --- | --- |
|  | **Chance to Hit Calc** |
| Payout 1 | (.2) \* (.08) \* (.04) \* (.08) \* (.2) = 0.00001024 |
| Payout 2 | (.04) \* (.12) \* (.04) \* (.04) \* (.16) = 0.0000012288 |
| Payout 3 | (.08) \* (.16) \* (.04) \* (.2) \* (.12) = 0.000012288 |
| Payout 4 | (.12) \* (.2) \* (.04) \* (.16) \* (.08) = 0.000012288 |
| Payout 5 | (.16) \* (.04) \* (.04) \* (.12) \* (.04) = 0.0000012288 |
| Payout 6 | (.16) \* (.04) \* (.2) \* (.04) \* (.08) = 0.000004096 |
| Payout 7 | (.08) \* (.016) \* (.2) \* (.04) \* (.04) = 0.000004096 |
| Payout 8 | (.08) \* (.08) \* (.12) \* (.16) \* (.04) = 0.0000049152 |
| Payout 9 | (.04) \* (.08) \* (.12) \* (.08) \* (.16) = 0.0000049152 |
| Payout 10 | (.04) \* (.04) \* (.16) \* (.08) \* (.08) = 0.0000016384 |

**Calculations 3**

|  |  |
| --- | --- |
|  | **Unmodified Payout** |
| Payout 1 | 1 **\***  0.00001024 = 0.00001024 |
| Payout 2 | 1 \* 0.0000012288 = 0.0000012288 |
| Payout 3 | 1 \* 0.000012288 = 0.000012288 |
| Payout 4 | 1 \* 0.000012288 = 0.000012288 |
| Payout 5 | 1 \* 0.0000012288 = 0.0000012288 |
| Payout 6 | 1 \* 0.000004096 = 0.000004096 |
| Payout 7 | 1 \* 0.000004096 = 0.000004096 |
| Payout 8 | 1 \* 0.0000049152 = 0.0000049152 |
| Payout 9 | 1 \* 0.0000049152 = 0.0000049152 |
| Payout 10 | 1 \* 0.0000016384 = 0.0000016384 |

**Calculations 4**

|  |  |
| --- | --- |
|  | **Show Payout** |
| Payout 1 | 2 **\*** 0.00001024 \* 0.95 = 0.000019456 |
| Payout 2 | 2 \* 0.0000012288 \* 0.95 = 0.00000233472 |
| Payout 3 | 2 \* 0.000012288 \* 0.95 = 0.000023332 |
| Payout 4 | 2 \* 0.000012288 \* 0.95 = 0.0000233472 |
| Payout 5 | 2 \* 0.0000012288 \* 0.95 = 0.00000233472 |
| Payout 6 | 3 \* 0.000004096 \* 0.85 = 0.0000104448 |
| Payout 7 | 3 \* 0.000004096 \* 0.85 = 0.0000104448 |
| Payout 8 | 3 \* 0.0000049152 \* 0.85 = 0.00001253376 |
| Payout 9 | 3 \* 0.0000049152 \* 0.85 = 0.00001253376 |
| Payout 10 | 3 \* 0.0000016384 \* 0.85 = 0.00000417792 |

**Calculations 5**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Symbols | Cost | Payout % | PAYOUT | Unmodified PAYOUT | Chance to HIT |
| Payout 1 |  | 2 | 0.95 | 0.00001024 | 0.00002048 | 0.000019456 |
| Payout 2 |  | 2 | 0.95 | 0.000012288 | 0.0000024576 | 0.00000233472 |
| Payout 3 |  | 2 | 0.95 | 0.000012288 | 0.00002456 | 0.000023332 |
| Payout 4 |  | 2 | 0.95 | 0.000012288 | 0.000024576 | 0.0000233472 |
| Payout 5 |  | 2 | 0.95 | 0.0000012288 | 0.000012288 | 0.00000233472 |
| Payout 6 |  | 3 | 0.85 | 0.000004096 | 0.000012288 | 0.0000104448 |
| Payout 7 |  | 3 | 0.85 | 0.000004096 | 0.000012288 | 0.0000104448 |
| Payout 8 |  | 3 | 0.85 | 0.0000049152 | 0.0000147456 | 0.00001253376 |
| Payout 9 |  | 3 | 0.85 | 0.0000049152 | 0.0000147456 | 0.00001253376 |
| Payout 10 |  | 3 | 0.85 | 0.0000016384 | 0.0000049152 | 0.00000417792 |

Progressive System

The progressive system for this machine is a dual static system that also the Bonus Game. As shown above the Critters side of player has a 2 dollar cost while the Trinkets have a 3 dollar cost. Notice the payout percentage is different for these two categories vs. the payout amount. This is how the two sides work. Players on the 2 dollar cost that get payouts 6 - 10 only build up the progressive pot displayed above the Trinket side display. Players on the 3 dollar cost that get payouts 1 - 5 only build up the progressive pot displayed above the Critter side display. This is to entice players to play that side of the payout where as they automatically get the payout for the side they are playing Critter or Trinket. The progressive system will take the following to add to the pot.

To win the progressive the player must play that side of the Critters or Trinkets where the payout is the normal winning plus the progressive pot total.

|  |  |  |
| --- | --- | --- |
|  | Winning divided by cost divided by Payout % | New Payout to be displayed |
| Payout 1 | 100 / 2 / .95 | 52.631578947368421052631578947368 |
| Payout 2 | 50 / 2 / .95 | 26.315789473684210526315789473684 |
| Payout 3 | 50 / 2 / .95 | 26.315789473684210526315789473684 |
| Payout 4 | 100 / 2 / .95 | 52.631578947368421052631578947368 |
| Payout 5 | 500 / 2 / .95 | 263.15789473684210526315789473684 |
| Payout 6 | 500 / 3 / .85 | 196.0784313725490196078431372549 |
| Payout 7 | 200 / 3 / .85 | 78.431372549019607843137254901961 |
| Payout 8 | 200 / 3 / .85 | 78.431372549019607843137254901961 |
| Payout 9 | 500 / 3 / .85 | 196.0784313725490196078431372549 |
| Payout 10 | 1000 / 3 / .85 | 392.1568627450980392156862745098 |