

# Luck vs Skill

## Tic Tac Toe - T3V2

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### Introduction

The purpose of this exercise is to analyze the existing ruleset of tic tac toe and create a variation of the game with respect to the set design goals in place.

### Overview

T3V2 is a variant of the traditional tic tac toe game and follows a similar ruleset and win condition but has a few twists that affect how players perform their actions or turns.

Instead of the turns alternating between X and O, each player receives a pool of points which they may use to bid to gain a turn. Each round, players may bid a certain amount of points each turn in order to gain the ability to play that turn. The exact amount the player bids is unbeknownst to each other until the bid is finished and they compare bids. The player with the highest bid gains the ability to play that turn but the points that were bid are swapped and players receive the points that each other bid.

Players, during their turn may also use a certain amount of their points in order to purchase ability cards off the market. These cards grant the players certain abilities/ bonuses when used thus making the game more dynamic and engaging.

### Rules

#### How to Play

- Players are given 100 points each.
  - Each round, players write down their bids on a piece of paper.
  - These bids are then compared and the highest bidder is allowed to place their marker (X or O) on the grid and the points that each of the players bid that round are exchanged.
  - If a bid is equal, the player with the least markers on the grid is declared the winner of the bid.
  - Players must bid a minimum of one point every turn.
  - Players can also buy or play Ability cards once a turn has been played (Details Below).
  - This is repeated until a win condition is reached.
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## Rounds

A Round happens in this order:

1. Both players place their bids.
2. Players compare their bids.
3. The points that were bid are exchanged.
4. The winner of the bid places their mark(X or O) on the grid.
5. The winner of the bid may choose to either purchase or play an ability card. They may also choose to neither buy or play an ability card as well.
6. The loser of the bid may choose to either purchase or play an ability card. They may also choose to neither buy or play an ability card as well.

## How to Win

Similar to the traditional Tic Tac Toe game, in order to win, players must place three of their marks, either X or O, in a horizontal, vertical or diagonal row. The first player to successfully do so wins the game.

## Market

After the end of the first 2 turns (i.e, once 2 total marks are placed on the board), the market is unlocked. The top 3 cards of the Ability Card deck is placed face up on the table and this becomes the current market. Players are able to purchase ability cards off the market by giving up the amount of points as mentioned on that particular card. The points spent on the market by the players go into the **Market Point Pool**.

Any card bought is immediately replaced by a card from the Ability Card Deck.

**Comments:** The market acts as a drain, where points are removed permanently (other than a few exceptions) from the game. This should help speed up the pace of the game slightly.

## Ability Cards

Once an ability card is acquired by a player, he/she places the card in his/her deck and may be used for the next round or kept until they want to use it.

Each round, after the players have placed their bids and the winner has played their turn, each player can choose to either purchase or play a card. If they purchased any card that round, they are unable to play one and if they played a card, they cannot purchase one. Players can only purchase one card at a time. A Player is not allowed to purchase a card if it will cause their total points to be zero.

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**Comments:** Players are restricted to the use of only one card per round as the use of multiple cards could potentially completely block the opponent from taking any action during their turn.

### **Card 01 - The Destroyer**

**Occurance Rate:** Medium

**Points:** 15

When played, this card grants player the ability to destroy or remove any one marker placed on the grid.

### **Card 02 - The Blocker**

**Occurance Rate:** High

**Points:** 10

When played, this card grants the player the ability to block any one space on the grid for the next round. Blocking prevents the other player from placing their marker on the blocked space on the grid.

**Comments:** Cards like the destroyer and the blocker can further decrease the effects of first turn advantages as the second player should have more points to spend on cards. Also adds possibilities for strategic plays.

### **Card 03 - De-Decker**

**Occurance Rate:** High

**Points:** 5

This card, once played, allows the player to remove any one card off the market. This card goes to the back of the deck and a new card from the top of the Ability Card deck takes its place.

### **Card 04 - Ultimate De-Decker**

**Occurance Rate:** Medium

**Points:** 10

This card, once played, allows the player to remove all three cards off the market. These cards go to the bottom of the deck and are replaced by three fresh cards from the top of the Ability Card deck.

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## Card 05 - Removal

**Occurance Rate:** Low

**Points:** 15

When played, allows the player to remove any one Ability Card from the opponent's deck.

**Comments:** The De-decker, Ultimate De-Decker and Removal cards enable players to deny certain cards that they do not want the opposition to have access to or use against them.

## Card 06 - Swipe

**Occurance Rate:** Medium

**Points:** 15

When played, grants the player 25% of the points in the **Market Point Pool** (Any points spent on the market goes to the Market point Pool).

**Comments:** The swipe card could potentially lead to a lot of interesting interactions as players wouldn't want to use the card before the Market Point Pool has accumulated a fair amount of points but at the same time would want to use it before the opponent is able to gain access to removal cards.

## Card 07 - Constrict

**Occurance Rate:** Low

**Points:** 15

Once this card is played, the opponent is prevented from bidding more than 25% of his current point pool in the next round.

**Comments:** This card can help lead to a lot of mind games among the players. Opponents hit by this card may bid very low thinking that they have no way of winning this round but the user might also bid quite low thus gaining a turn for minimal point cost. Or the opposite could happen where the opponent thinks that the user is baiting a low bid from him/her. Thus this card can also hurt the user as much as the opponent depending on how it is used.

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## Card 08 - Purge

**Occurance Rate:** Medium

**Points:** 10

Once played, this player is protected from the effects of Constrict, Removal and the Destroyer ability Cards for the next turn.

**Comments:** The intention with this card is to prevent players from constantly getting disabled with constrict, removal or destroyer cards. This enables the player to defend if the opponent has a large number of these cards in hand.

## Following the Design Goals

### Recognisable variant of Tic Tac Toe

Even though various rulesets have been tweaked and added, the core game fundamentally remains the same with a players objective being to place three their markers (X or O) in a horizontal, vertical or diagonal row. The skills required while playing a traditional game of tic tac toe still remains in T3V2. The board is also the same with a 3x3 grid. Hence T3V2 can almost immediately be recognised as a variant of Tic Tac Toc by an external viewer.

### Not as predictable as Tic Tac Toe

The system where both players bid for their turns and their lack of awareness of each others bids make the turns and actions less predictable. The addition of cards also make the game more dynamic and increase the possibility space within the game thus making it less predictable.

### Similar chance to win for both players

The 'first turn advantage' provides the first player in tic tac toe a significant advantage as they essentially gain an extra turn. In some cases the player who plays second can win the very next turn but is unable to simply because the other player had an extra turn.

Again, the 'turns' system, if played right by the player somewhat negates the first turn advantage as both players have a chance to get the first turn and they can decide how many points they want to bid for the first turn. If both players decide to bid high for the first turn, the person who wins the bid gets a slight advantage while if one player bids high and the second

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player bids low, the second player loses the first turn but gains a significant point advantage. Also, since the bid points are swapped after each bid the losing bid always gains more points (just the amount varies).

Some of the cards also give players the abilities to cancel certain turns and since the losing bid gains relatively more points, it becomes slightly easier for them to purchase cards.

## **An element of Luck or Chance**

Since the players are unaware of the points that each other bids, there is certain amount of luck or chance as to which player gets to play the turn. They can always bid high to ensure a turn but this will lead to the opponent amassing a large amount of points. So players must attempt to predict the bid from the other player. There is also some luck or chance as to what cards appear on the market which can work to a players advantage or disadvantage.

## **Play time lesser than 10 minutes**

The bid and card system will increase the time taken in comparison to a traditional game of tic tac toe but at the same time, the market (removes points from players) and certain cards should be able to slightly speed up the pace of the game. If the game time is still too long, certain time restrictions can be added in which the player with the most points at the end of the timer wins.

## **Room for future gameplay content**

The ability cards grant us the ability to easily add future gameplay content with new and unique ability cards.

## **Reasoning and Conclusion**

The intention with T3V2 was to maintain the core of tic tac toe but at the make its outcomes and actions less predictable and introduce elements of chance/ luck to it.

The bid system creates an environment where the players have to think about the exact amount of points they want to invest in a bid for a turn. It also ensures that the player who has lost multiple turns to the opponent has a chance to comeback into the game as they now possess a larger amount of points and know exactly how much the opponent can afford to bid on the next round.

This could lead a lot of fun gameplay possibilities, strategies and mind games.

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Even though this may slightly increase the skill requirements from traditional tic tac toe, the skill set required for tic tac toe is still maintained. So a good tic tac toe player should still stand a better chance at winning against someone who hasn't played it.

The card system is intended to add another layer of complexity, immersion and chance to the game. It emphasises on the player's need to make use of their points wisely. Certain cards can also be used as a part of various strategies to bait out the opponent to bid more(or less). Smart use of cards can win players games and this enables the players to use various strategies and keeps gameplay dynamic and fresh as there is no way of knowing exactly what cards one can get.