# (Jackpot) <3847936>

Jackpot is a provably fair just-dice.com chat game, where players compete to most accurately predict the next dice roll. Jackpot is multiplayer, scalable, and welcomes bets of all sizes. Test the accuracy of your prediction skills and wager according to your confidence. The bot's fee for participation in a Jackpot session is 1% of total jackpot balance. The profit will contribute to further development of new and innovative bots for just-dice.com and other cryptocurrency projects for the community at large.

#### Commands

Just-Dice.com user (Jackpot) <3847936> responds to the chat token *!jackpot*.

*help* - Concise description of bot usage and command list.

**balance** – Current Jackpot balance (total amount of tips) received since the opening of the Jackpot session.

serverseedhash - Current Jackpot just-dice server seed hash.

#### **Bets**

Users may place bets by tipping just-dice.com user (Jackpot) <3847936> with a comment containing their prediction for the next dice roll. Malformed bets are promptly rejected and returned to the originating user.

Valid bets adhere to the following:

- Numbers in the range [0.0000, 99.9999]
- Specify up to 4 decimals of precision.

#### Examples:

- 12.3456
- 1.2345
- 1.234
- 1.23
- 1.2
- 1

#### **Sessions**

A Jackpot session is initiated when at least two users have submitted bets to the Jackpot account. A five-minute timer is started at the instant that a second distinct gambler submits their first bet. When the timer expires, the Jackpot account issues a dice roll which determines the distribution of the jackpot among the pool of participants.

### **Provably Fair**

At the beginning of each session, the hashed just-dice server seed is publicly visible to all users. Likewise, at the end of each session (after roll is executed), the plaintext just-dice server seed is exposed such that players can verify the outcome of the Jackpot session.

### The Math

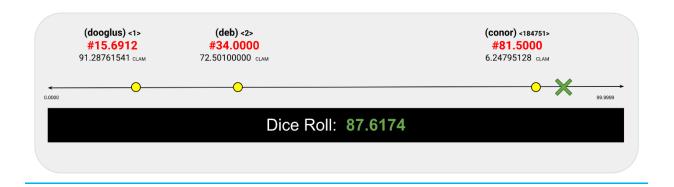
The distribution of the Jackpot balance to each player is determined by the weighted distance between a player's prediction number and the roll outcome. The Jackpot distribution algorithm is very similar to weighted average grading system commonly found in educational institutions.

The bet "weighting factor" is calculated according to the proportion of the bet amount to the total Jackpot balance.

The "grade" is calculated according to the distance between the bet prediction and the roll outcome.

$$betDistance = abs(roll - betPrediction)$$
 
$$betGrade = 1 - (\frac{betDistance}{100})$$
 
$$betWeight = \frac{betWager}{jackpotBalance}$$
 
$$weightedGrade = betGrade * betWeight$$
 
$$curveFactor = \frac{1}{\Sigma \text{ weightedGrades}}$$
 
$$profit = curveFactor * betWager * weightedGrade$$

## **Example Session**



User	Lucky #	Wager (CLAM)	
(dooglus) <1>	15.6912	91.28761541	
(deb) <2>	34.0000	72.50100000	
(conor) <184751>	81.5000	6.24795128	

prediction	wager	betWeight	distance	betGrade	weightedGrade	Profit
15.6912	91.28761541	0.536870493	71.9262	0.280738	0.150719949	66.91616748
34	72.50100000	0.426384756	53.6174	0.463826	0.197768336	87.80456213
81.5	6.24795128	0.036744751	6.1174	0.938826	0.034496927	15.31583708

#### In summary:

Dooglus wagers the most CLAM, while having the furthest lucky number. Conor wagers the least CLAM, while having the closest lucky number. Conor's final profit multiplier is approx. 2.451337x, Doog's is 0.733026x, and Deb's is 1.211081x.