1.

a)

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| --- | --- | --- |
| Round | Ending Amount | Number of games  Played |
| 1 | 900 | 1 |
| 2 | 700 | 2 |
| 3 | 1100 | 3 |
| 4 | 1200 | 4 |
| 5 | 1300 | 5 |
| 6 | 1400 | 6 |
| 7 | 1300 | 7 |
| 8 | 1100 | 8 |
| 9 | 1500 | 9 |
| 10 | 1400 | 10 |

Though as per above result I won the game, but as it is based on the random number in crap, so we cannot predict and formulate that any particular algorithm which can always make you winner.