

# Tournament Matchups (#105)

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In a single-elimination tournament, there is usually a previously established ranking for the participating players or teams, such as that the best players or teams are matched against the worst ones. This is done this way so there is a higher chance for the top players/teams to meet in the final.

For example, in a small 8-player tournament, there would be 3 rounds. This first round would be setup like this:

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Round 1
1 x 8
2 x 7
3 x 6
4 x 5
```

This is easy enough. The tough part is arranging the pairing for the following rounds respecting the best vs worst rule, so, imagining that all the favorites won their games, we would have 1x4 and 2x3 in round 2 and then finally 1x2 in the final. For this to happen, the tournament would have to be arranged this way:



If the numbers of players/teams is not a potency of 2, then the top players would have a "bye" in the first round, so, a 6-player draw would go like this:



So, this quiz is about writing a single-elimination tournament generator for any number of players/teams obeying the best vs worst rule in all rounds.

Casos de testes sugeridos:

- n=2, n=4, n=3, n=8, n=15