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Round-Robin Formats

A simple alternative to double elimination.

Do you enjoy playing in double-elimination format tournaments? If you're like me, you find them torture. If you lose your first match, you have to win twice as many matches as the guy who beat you in order to finish in the same spot. How can that be fair?

Round-robin is an alternative format that solves many of the problems with "DE." It was the most popular championship format for many years, and was only displaced when tournaments started having much larger fields. Even with a large field, it is possible to have a modified round-robin that lets most of the players play more games, and is fairer in the selection of who advances.

In the basic round-robin tournament, everyone plays everyone else once. This is a standard arrangement for most league play. A main problem is to construct a schedule. There are programs and pamphlets for this, but it is very easy to do by hand. For example, suppose we have eight players, or teams, numbered 1 through 8. Write these down in two rows like this:

1 3 4 5
2 8 7 6

Pair these by columns to find the first-round matches: 1-2, 3-8, 4-7, 5-6. Ideally, all these matches happen at the same time. Now here's the tricky part. Keeping the "1" in its place, rotate all the rest counterclockwise:

1 4 5 6
3 2 8 7

The numbers on the top row moved to the left and the numbers on the bottom row moved to the right, giving the second-round matches: 1-3, 2-4, 5-8, 6-7. Continue this until you have seven rounds. Since each player plays everyone else, the number of rounds in a round-robin will always be one less than the number of players.

This method of "construction by rotation" works for any even number of players. If you have an odd number of players, just insert an extra player named "Bye" and you're back to the even case. Bye's opponent gets to sit out that round. There will be as many rounds as there are real players in this case.

If you work through the above example,

you'll see that Player 1's opponents in each round are in numerical order. It may be that it is better to have a different order. The usual problem that comes up is that if two friends are matched up in a late round, they may decide who should win to have the best chance to take first place. Suppose

Figure 1

	A	B	C	D	E	F	W-L
Andy			W	W	W	W	4-0
Bill			W	W	2	3	2-2
Carl	3	1			3	2	0-4
Dave	3	2			3	0	0-4
Earl	0	W	W	W			3-1
Fiona	2	W	W	W			3-1

Andy and Bill are buddies, and when they play each other, Andy has a 4-0 record and Bill is 2-2. There is a temptation for Bill not to shoot his best so that Andy can advance to 5-0 and have a lock on a major prize. To avoid this problem, you can invoke the "brother-in-law" rule: matches between friends/cousins/road partners will be in the early rounds. To accomplish this, simply rearrange the order of the rounds, or assign the names to the initial numbers to put all of the buddy-buddy matches in the first round or two.

The results are usually shown on a special round-robin chart. **Figure 1** shows the partial results of a six-player tournament. The players' names are entered on the left side and across the top (perhaps abbreviated). The entries in the grid show the match scores for the play so far in this race-to-four event. For example, Andy has four wins on his row from his matches, marked as Ws across. To find out the scores of his opponents in those matches, just read down the "A" column to see, for example, that Carl won three games against Andy.

There are three matches left, Andy-Bill, Carl-Dave and Earl-Fiona. At this point in the tournament, the spectators will be figuring out all the possibilities. If Andy wins, he has first place for sure, but if he loses he'll be tied with either Earl or Fiona,

because one of them has to win and will also have a 4-1 record.

The tournament director better still have the paper he read from at the start of the tournament that describes the tie-breaking criteria. If Andy loses and Earl wins to tie him with a 4-1 record, there are two common ways to decide first place.

One is by a playoff, but often there is no time for that. Alternatively, a two-way tie can be decided by the match that the two players played. Since Andy beat Earl earlier, he would get first and Earl would get second.

Other ways to decide ties include total points scored, points allowed, and inning average. The actual method is not as important as having it written down and posted. Include all the criteria in order, such as head-to-head; most points scored; fewest points allowed; one-game playoff. Also, the rule for forfeits is important to set ahead of time. If a

player abandons the tournament — that is, he fails to play his last several matches — it is reasonable to simply erase his entire record. If someone misses one match, assign an F for his score for zero points.

Remember the brother-in-law rule? In the tournament shown, the angles are a little different. Because Andy is guaranteed first before the final round is played, he can lose to Bill without cost. On the other hand, another win for Bill will tie him for third place with the loser of the Earl-Fiona match, and that might be worth a little more prize money.

In a league situation where one team travels and one plays at home, you also have to assign home/away for each match. Usually this can't be done perfectly, so that every team gets an equal number of home and away games, and there are never more than two homes or aways in a row for any team. If the league plays a "double round-robin," so that each match-up occurs twice, a simple rule is to play at home in the second half if you played that team away in the first half.

In some situations, it is best to arrange the rounds so that the best matches are saved for the final rounds. It helps if the relative strengths of the players are known at the start, and the players are entered into the chart in order of ability. A schedule con-

Figure 2

	1st	2nd	3rd	4th	5th	6th	7th	8th
1st		7	6	5	4	3	2	1
2nd	7		5	6	3	4	1	2
3rd	6	5		7	2	1	4	3
4th	5	6	7		1	2	3	4
5th	4	3	2	1		7	6	5
6th	3	4	1	2	7		5	6
7th	2	1	4	3	6	5		7
8th	1	2	3	4	5	6	7	

structured to "save the best for last" is shown in Figure 2. The entries in the grid are the rounds in which each match takes place. For example, the top-ranked player (1st) plays the worst player (8th) in the first round. Notice that the nominal "number one" has progressively more difficult matches in each round, until he plays the nominal number two in the seventh round. Also note that all the matches among the top four players will take place in the final three rounds (5-6-7).

If a league plays a double round robin, the second half can be set up by Seedings from the standings after the first half, to make the final weeks of play the most important.

The main problem with round-robins is the very large number of matches for a large number of entries. Local pool tournaments commonly draw 50 players or more, and even if you had 25 tables to play on, 49 rounds would be more than most could stand. The standard way to handle this is to play "round-robins in flights." The players are divided up into smaller groups, and each group plays its own mini-round-robin. For 48 players, eight groups of six would work. Two players could advance from each group, giving 16 in the next round. At that point, everyone would have played five matches, so to save time you could switch to a single-elimination format, and there would be only four more rounds. With plenty of time, perhaps in a two-day tournament, you could instead divide the 16

players into four flights of four with one player advancing to a final round of four players. That would leave six rounds on the final day.

At the recent Conlon Worldcup 3-Cushion tournament in Las Vegas, the problem was how to accommodate 132 entries on eight tables in three days to select 12 qualifiers to advance to the main tournament with the seeded players. One way would have been to have a single-elimination tournament, but it would be brutal for the many foreign players to travel such a long way for possibly only one match. To guarantee at least two matches for everyone, the first round was set up as 48 round-robins in groups of three. Some groups had only two players, so they played each other twice. The single winner from each group then went on to two rounds of single-elimination, so no one played more than four matches in the preliminaries.

Round-robins are especially well suited to determine the best player among eight or so. They also work well for a league format with a long schedule. Even for fairly large, short tournaments, their advantage of giving everyone a reasonable amount of play makes them worth trying. A free on-line schedule planner is available at the Web site <http://www.playpool.com>.