



## Tie-breaking in Swiss system tournaments

Tie-break systems are used in Swiss system chess tournaments to break ties between players who have the same total number of points after the last round. If the players are still tied after one tie-break system is used, another system is used, and so on, until the tie is broken. The WSCF uses a computer software program, Windows TD 4.03, to calculate the tie breaks in the USCF recommended tie break order.

### USCF recommended order

The U.S. Chess Federation (USCF) recommends these as the first four systems to be used: (Rule 34E)

Modified Median  
Solkoff  
Cumulative  
Cumulative of Opposition.

### *Median* \*

The Median system is also known as the Harkness System, after its inventor Kenneth Harkness. This system sums the number of points earned by the player's opponents, discarding the highest and lowest. If there are nine or more rounds, the top two and bottom two scores are discarded. Unplayed games by the opponents count  $\frac{1}{2}$  point.

\* The Median system is not used as one of the USCF recommended tie breaks, but an understanding of the median system is necessary to correctly understand the Modified Median, and Solkoff systems

### Modified Median

The Modified Median system is similar to the Median system, except:  
Players with exactly 50 percent score (even scores) are handled as in the regular Median system  
Players with greater than 50 percent score (plus scores) have only their lowest-scoring opponent's score discarded  
Players with less than 50 percent score (minus scores) have only their highest-scoring opponent's score discarded.

### Solkoff

This system is the same as the Median system, except that NO scores are discarded.

### Cumulative

This is the sum of the running score for each round.  
For example, if a player has (in order) a win, loss, win, draw, and a loss; his round-by-round score will be: 1, 1, 2,  $2\frac{1}{2}$ ,  $2\frac{1}{2}$ . The sum of these numbers is 9.

### Cumulative opponent's score

This sums the cumulative scores of the player's opponents.

Examples of the four tie break systems used by the WSCF are illustrated on the following pages.



**Modified Median**

This system sums the number of points earned by the player's opponents. Unplayed games by the opponents count 1/2 point.

Players with exactly 50 percent score (even score): discard the highest and lowest. If there are nine or more rounds, the top two and bottom two scores are discarded.

Players with higher than 50 percent score (plus scores) have only their lowest-scoring opponent's score discarded. If there are nine or more rounds, the bottom two scores are discarded.

Players with less than 50 percent score (minus scores) have only their highest-scoring opponent's score discarded. If there are nine or more rounds, the top two scores are discarded.

*Please refer to the example crosstable on the last page.*

The first step is to determine the current round maximum score.  
Since 6 rounds have been completed, the current maximum score = 6.0

Next we find the "even" or 50% score. The even score is half of the max score.  $6.0/2 = 3.0$   
The "even" score is 3.0

Any score above 3.0 is a "plus" score (more than a 50% score).  
Any score below 3.0 is a "minus" score (less than a 50% score).

From our example crosstable we see Player A and Player B both have a score of 6.0 which is a "plus" score. Now we need to add the scores of the player's opponents'.

Looking at the cross table, we can see that "Player A" played against players 6, 3, 9, 5, 4, and 7.

"Player B" played against players 15, 5, 4, 3, 10, and 9

The tables below show the results.

Because both player A and B have "plus" scores, we discard the lowest scoring opponent.

Player A wins the tie break.

No.	Name	Pts	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	TBrk1
1	Player, A	6.0	W6	W3	W9	W5	W4	W7	
<b>Opponents Scores</b>			3.0 *	4.0	2.5 **	3.5	3.5	3.0	<b>17.0</b>

\* Player 6 had an unplayed game which counts as 1/2 point for the Modified Median Calculation.

\*\* Player A has a "plus" score, the lowest scoring opponent (2.5) is discarded.

No.	Name	Pts	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	TBrk1
2	Player, B	6.0	W15	W5	W4	W3	W10	W9	
<b>Opponents Scores</b>			1.5 *	3.5	3.5	4.0	2.5	2.5	<b>16.0</b>

\* Player 15 had an unplayed game which counts as 1/2 point for the Modified Median Calculation.

\* Player A has a "plus" score, the lowest scoring opponent (1.5) is discarded.



### Solkoff

This system is the same as the Median system, except that no scores are discarded. Using Player A and B from our example cross table produces the result shown below.

No.	Name	Pts	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	TBrk2
1	Player, A	6.0	W6	W3	W9	W5	W4	W7	<b>19.5</b>
<b>Opponents Scores</b>			3.0 *	4.0	2.5	3.5	3.5	3.0	

\* Player 6 had an unplayed game which counts as 1/2 point for the Solkoff Calculation.

No.	Name	Pts	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	TBrk2
2	Player, B	6.0	W15	W5	W4	W3	W10	W9	<b>17.5</b>
<b>Opponents Scores</b>			1.5 *	3.5	3.5	4.0	2.5	2.5	

\* Player 15 had an unplayed game which counts as 1/2 point for the Solkoff Calculation.

### Cumulative

To calculate this, sum the running score for each round. For example, if a player has (in order) a win, loss, win, draw, and a loss; his round-by-round score will be 1, 1, 2, 2½, 2½. The sum of these numbers is 9.

Using **Player C and D** from our example cross table produces the result shown below.

No.	Name	Pts	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	TBrk3
4	Player, C	3.5	W14	W7	L2	W12	L1	D5	<b>14.5</b>
<b>Running Total</b>			1.0	2.0	2.0	3.0	3.0	3.5	

No.	Name	Pts	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	TBrk3
5	Player, D	3.5	W11	L2	W10	L1	W12	D4	<b>12.5</b>
<b>Running Total</b>			1.0	1.0	2.0	2.0	3.0	3.5	

### Cumulative opponent's score

This sums the cumulative scores of the player's opponents. The cumulative scores of all opponents are added, producing a large number. Using Player A and B from our example cross table produces the result shown below.

No.	Name	Pts	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	TBrk4
1	Player, A	6.0	W6	W3	W9	W5	W4	W7	<b>68.0</b>
<b>Opponents Running Total</b>			7.0	13.0	10.0	12.5	14.5	11.0	

No.	Name	Pts	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	TBrk4
2	Player, B	6.0	W15	W5	W4	W3	W10	W9	<b>65.0</b>
<b>Opponents Running Total</b>			4.0	12.5	14.5	13.0	11.0	10.0	

WSCF Example Crosstable

There are 15 players in the section. 6 rounds have been played.

**Place**

**Score**

**Tie Break results**  
1. Modified Median 2. Solkoff  
3. Cumulative 4. Cumulative Opp.

**Round Results and opponent**  
Example: Player A (W) on round 4 against player (5)

No.	Name	Pts	TBrk1	TBrk2	TBrk3	TBrk4	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6
1	Player, A	6.0	17.0	19.5	21.0	68.0	W6	W3	W9	W5	W4	W7
2	Player, B	6.0	16.0	17.5	21.0	65.0	W15	W5	W4	W3	W10	W9
3	Player, E	4.0	19.0	20.5	13.0	78.0	W12	L1	W13	L2	W8	W10
4	Player, C	3.5	20.0	21.5	14.5	79.5	W14	W7	L2	W12	L1	D5
5	Player, D	3.5	20.0	21.5	12.5	81.5	W11	L2	W10	L1	W12	D4
6	Player, I	3.5	14.0	14.0	7.0	51.0	L1	L10	D11	-B-	W13	W14
7	Player, F	3.0	9.5	17.0	11.0	66.5	W13	L4	L12	W9	W14	L1
8	Player, M	3.0	8.0	12.0	10.0	46.0	-B-	L9	W15	L10	L3	W12
9	Player, G	2.5	16.0	22.0	10.0	80.0	D10	W8	L1	L7	W11	L2
10	Player, N	2.5	15.5	21.5	11.0	73.5	D9	W6	L5	W8	L2	L3
11	Player, K	2.5	9.0	12.5	6.0	40.5	L5	D15	D6	D13	L9	-B-
12	Player, L	2.0	12.5	16.5	8.0	61.0	L3	-B-	W7	L4	L5	L8
13	Player, O	2.0	11.0	15.0	7.0	47.0	L7	W14	L3	D11	L6	D15
14	Player, J	2.0	9.5	13.0	6.0	43.5	L4	L13	-B-	W15	L7	L6
15	Player, H	2.0	8.0	14.0	4.0	50.0	L2	D11	L8	L14	-B-	D13

W = Win 1 point  
L = Loss 0 points  
D = Draw 0.5 points  
-B- = Bye 1 point

An unplayed game due to an odd number of players in the section.