from Chapter 2 of the US Chess Federation's RULES OF CHESS, 7th Edition. This excerpt comprises the US Chess-recommended tiebreak systems only. To read the complete section on tiebreaks, or for other sections of the online edition of the rule book, download your copy here.

34. Breaking Ties

34A. Introduction.

There is no perfect tiebreak system; each has its faults. In some events, especially large ones, ease and speed of calculation is a concern. In other events where time is not pressing, playoffs provide a better alternative to traditional tiebreak systems. Playoffs are often conducted at a faster time control than the tournament; even five-minute games have been used.

34B. Announcement.

When used, tiebreak systems should be posted at the site before the first round. There are several tiebreak systems that provide good and objective methods for directors to break ties for indivisible prizes. Frequently, one tiebreak method alone will not break the tie, and it is necessary to use a secondary and sometimes even a tertiary method to produce a decision. Thus, at least the first two tiebreak systems should be posted. The director should be prepared to explain how the tiebreak systems work, as time permits.

34C. Monetary prizes.

Tiebreaks are not used for cash prizes, which are divided evenly among the tied players. An exception is a playoff, which may be used to determine cash prizes if notice of this is given in all detailed pre-tournament publicity.

34D. Choice of tiebreak methods.

Different systems will yield different results, but the systems discussed here are not capricious or random. Each seeks to discover the *first among equals*, the player who has a somewhat better claim to a prize than those who earned the same score based on the strength of his or her opposition. Which system to choose depends on the nature of the tournament, its traditions, and the qualities required for the specific situations and conditions at hand.

34E. Calculating Swiss tiebreaks.

Unless a different method has been posted or announced before the start of the first round, players will expect the following sequence of tiebreak systems to be employed as the first four tiebreakers. Any variation to be used within the various systems should be posted also. These systems (and some additional ones) are explained in detail following the list.

1. Modified Median
2. Solkoff
3. Cumulative
4. Cumulative of Opposition

34E1. Modified Median

The Median system, also known as the Harkness system for inventor Kenneth Harkness, evaluates the strength of a player's opposition by summing the final scores of his or her opponents and then discarding the highest and lowest of these scores.

In the Modified Median system, players who tie with even scores (an even score is equal to exactly one half of the maximum possible score), have the highest- and lowest-scoring opponents' scores excluded. The system is modified for players with non-even scores to disregard only the least significant opponents' scores: the lowest-scoring opponent's score is discarded for tied players with plus scores and the highest-scoring for tied players with minus scores.

For tournaments of nine or more rounds, the top two and bottom two scores are discarded for even-score ties, the bottom two scores for plus-score ties, and the top two scores for minus-score ties.
These scores are adjusted for unplayed games, which count a half point each, regardless of whether they were byes, forfeits, or simply rounds not played after an opponent withdrew. So an opponent who won the first two games, lost the third, withdrew and did not play rounds four or five would have an adjusted score of 3 points (1+1+0+0.5+0.5 =3). These adjusted scores are used only to calculate the opponent's tiebreaks. The player's own score is not changed. If the player involved in the tie has any unplayed games, they count as opponents with adjusted scores of 0.

34E2. Solkoff.
The Solkoff system is the same as the Median system (34E1) except that no opponents' scores are discarded.

34E3. Cumulative.
To determine cumulative tiebreak score, simply add up the cumulative (running) score for each round. For example, if a player's results were win, loss, win, draw, loss, the wall chart would show a cumulative score round by round as
1, 1, 2, 2.5, 2.5. The cumulative tiebreak total is 9 (1+1+2+2.5+2.5 = 9). If another player scored 2.5 with a sequence 1, 2, 2.5, 2.5, 2.5, the tiebreak points scored would be 10.5 (1+2+2.5+2.5+2.5 = 10.5). The latter player's tiebreaks are higher because he or she scored earlier and presumably had tougher opposition for the remainder of the event. One point is subtracted from the sum for each unplayed win or full-point bye (22B); likewise, one-half point is subtracted from the sum for each unplayed draw or half-point bye.

This system is ideal for large events, since it is very fast and easy to use. It also avoids the problem, common in Median and Solkoff, of having to wait for a lengthy last-round game between two non-contenders to end for top prizes to be decided. Another advantage is that last-round scores need not be included in calculating cumulative tiebreak points, since they have no effect on breaking the tie (both tied players will necessarily have the same last round score).

34E9. Cumulative scores of opposition.
The cumulative tiebreak points of each opponent are calculated as in 34E3 and these are added together.