

Scoring methods and tactics for Duplicate and Swiss pairs

This note discusses the match-point (MP) and international match-point (IMP) scoring methods and highlights subtle changes to bidding and card play strategies that these different methods require. It also summarises the process for Swiss Pairs competitions. A simple summary of IMP scoring – “Climbing the IMP Ladder” – is available as a separate hand-out.

In duplicate pairs you are competing to get a better score than all other pairs sitting in the same direction. The ‘better score’ in question is not the trick score which you enter on the traveller (+420 for bidding and making 4♠ non-vulnerable, etc.) but scores derived from these trick scores. The Laws of Duplicate Bridge define three methods of derived scoring:

- Matchpoint (MP),
- International Matchpoint (IMP), and
- Total Point or Aggregate.

Aggregate scoring – simply summing the trick score from every board – is rarely used as it is manifestly unfair when all boards are not played by everyone; for example if because of the movement you don’t get to play the one board of the evening on which you can make a slam, your aggregate score will be missing the slam bonus that your competitors have obtained. Aggregate scoring is not discussed further in this note.

In addition to the above, some competitions then convert scores to Victory Points (VP). Victory Point conversion scales are not part of the Laws of Bridge, but are determined by the body running the competition.

Matchpoint scoring

In matchpoint scoring you get 2 match points for every pair that your trick score beat theirs. So if there are 7 tables and you get a ‘top’ on the board, you have beaten the pairs at the other six tables and score $6 \times 2 = 12$ MPs. The hypothetical traveller shown in Appendix 2 shows this conversion. MPs for each board are summed and the percentage of the maximum possible MPs (assuming you got a top every time) is calculated.

This is the scoring method most commonly encountered in duplicate bridge. The reason for this is largely historic: it is straightforward to do manually. With scoring being done on computers these days, simplicity of implementation is no longer the compelling reason for adopting the method.

IMP scoring

As its name implies, IMP scoring was originally introduced for international and other team competitions. However some argue that the Laws of Bridge purposely include bonuses for making games and slams and that IMP scoring better rewards those who gain these bonuses. They also argue that when IMP scoring is used the contract itself sets a clear goal for both the defenders and declarer, frequently allowing a more sophisticated (argued as ‘better’) level of card play and counter-play. Proponents of the tactics required for IMP scoring argue that it is “better bridge”. As a consequence, methods for using IMP scoring in duplicate pairs have been devised: the two main ones are Cross-IMP scoring and Butler scoring.

In IMP scoring the trick score between two pairs playing the board in the same direction is compared and the *difference* converted to IMPS using a scale defined in the Laws of Duplicate Bridge (see the table in Appendix 1). The scale awards more IMPS as the difference increases.

Cross-IMP scoring computes the difference between your trick score and that of every other pair in turn, converts each to IMPS and then averages these. If there are 7 tables, then for every board each pair is compared to 6 other pairs sitting in the same direction. The six comparisons for the board are

then averaged, and the average for every board summed. Calculating these differences manually would be so time consuming as to be impractical, but the task is ideal for computers.

Butler scoring is a less complex form of IMP scoring: in this the trick scores for all pairs are averaged to find a 'datum', and then the difference between your score and this datum is converted using the IMP scale to give your IMP score for that board. In calculating the datum sometimes the highest and lowest trick scores are omitted on the grounds that they may be anomalous.

Cross-IMP and Butler scoring generally but not always give similar results. The two principle advantages of the Butler method compared to cross-IMP scoring are:

- it is easier to do by hand (but this is irrelevant if you have a computer to score as we do);
- it is rather easier to see where your score has come from (as the final traveller seen on the web normally has the datum shown).

The principle disadvantages are of the Butler method compared to cross-IMP scoring are:

- the scores for North/South and East/West are not guaranteed to sum to zero, which is particularly of concern if it is a one winner movement.
- anomalous things can happen, for example if the director adjusts your score your trick score goes up but your Butler IMPs may go down.

Of the two IMP scoring methods for pairs, the cross-IMP method is technically superior to Butler and with modern computing capabilities is to be preferred.

Matchpoint and IMP scoring compared

An illustrative traveller with resulting MP and raw IMP scores is given in Appendix 2. For illustration purposes the results have been ordered so that table 1 NS have the best trick score and table 7 the worst. To the right of the traveller are columns showing the trick scores converted to Matchpoints and IMPS. The calculation of IMP score for NS pair 1 is given in Appendix 3 and that for pair 3 in Appendix 4; other pairs scores are calculated in a similar fashion.

The first thing to note is that, regardless of the scoring method used, the pair ranking is very similar. Regardless of the scoring method:

- Those that bid and make slams score better than those who play in games.
- Those that bid and make games score better than those who play in part scores.
- Those who fail to make their contract score poorly.
- Those who make overtricks score better than those who do not.

But a more subtle distinction is the *differences* in MPs and IMPs between successively ranked pairs. There are two factors here:

- The IMPs awarded are more closely correlated with the trick scores than are MPs.
 - In particular IMPs scores award those gaining game and slam bonuses, which at 300 for a non-vulnerable game to 1500 to a vulnerable grand slam are significantly bigger than the bonuses for making overtricks (20 or 30 points per overtrick).
- The MP scale is relative – the greater the number of tables, the bigger the difference between the top and bottom MP scores. The IMP scale is absolute – the IMP differences apply regardless of the number of tables.
 - From the scores in appendix 2 of pairs 1 and 7, we see that the difference between them is 12 MPs and from appendix 3 it is 14 IMPs. But this is for seven tables. Had there been seventeen tables, the difference may have been 32 MPs but it would still be 14 IMPs. And had there been only four tables, the difference would be only 6 MPs but it would still be 14 IMPs.

The effect of scoring method on tactics

For those that want to maximise their score and ranking, there is a need to apply subtly different tactics for bidding and for play depending upon whether the scoring is by MPs or IMPs. The main differences are:

Bidding

Choice of suit

Matchpoint scoring

Playing in higher-scoring denominations (major suits rather than minors) is important, as it may lead to extra points. The 10-point premium for playing in NT rather than a major encourages you to play in this denomination rather than a suit.

IMP scoring

Playing in the safest denomination is important, as it is more likely to ensure making the contract. With a known 8+ card fit, major suit games are preferred to NT.

Games and Slams

Marginal ones should be avoided. Although you will get an outright top by being the only pair to bid and make a slam, if you bid a slam but go one off when the rest of the room is in 4♠ making an overtrick you get a bottom. So you bid slams conservatively.

Thin games and slams are often bid, especially vulnerable. Bidding a game with 40 percent probability of success vulnerable and 45 percent nonvulnerable, or a small slam with 50 percent probability, is worth the risk, and anything over that increases the probability of a positive IMP score in the long run.

Sacrifices

Are more frequent. Going down 500 trick points on a doubled contract is a good result if the opponents can score 620 points for a game, usually leading to significantly better MPs.

Are less frequent, for if they fail (because the opponents were going down) they will be expensive.

Doubles

Are more frequent, as a penalty increases the score. For example, "the magic 200" refers to the situation when a pair beats the vulnerable opponents one trick doubled — the score of 200 obtained will score better than part-game contracts played at other tables.

Are less frequent, as they do not gain many IMPs and they may influence declarer's play to your disadvantage. (Often, when an opponents' contract is doubled, it turns declarer's attention to the bad lie of cards, and may induce him to take a successful line of play that he would not otherwise take).

Play

Overtricks

Matchpoint scoring

Are important. On an almost flat board, you will get an outright top if you get one more trick than the rest of the room. So you strive for overtricks.

IMP scoring

Not worth a significant risk of losing a game bonus of 300 or 500 points = 8 or 11 IMPs or to a lesser extent a part score of 110 to 190 trick points = 3 to 5 IMPs for the potential gain of 1 IMP for an overtrick. This is not saying that overtricks are unimportant; they are part of a risk-reward judgement.

Safety plays

Often neglected in the hunt for overtricks

Are very important. It is worth guaranteeing a game bonus of 300–500 trick points = 8–11 IMPs or to a lesser extent a part score of 110 to 190 trick points = 3 to 5 IMPs for the potential loss of 1 IMP for an overtrick.

The IMP Ladder

So if the intention is to rank duplicate pairs players by their ability, which scoring method is fairest? Over thousands of boards they will result in very similar ranking. But in a typical club session we play only 24 or 26 boards. This is isn't completely fair. For example, if you happen to play a board against a really good pair who make a slam when everyone else fails, you get a poor score. Using IMP scoring – and it doesn't matter whether it is Cross-IMP or Butler – you have to claw back a big deficit and this may take many boards to do. For this reason, when IMP scoring is adopted for duplicate pairs (as opposed to teams), the number of boards played should be greater than normally managed in a single club session. One way of doing this is to run a ladder, in which IMP scores are accumulated over several sessions.

Swiss Pairs

Swiss Pairs is a form of duplicate bridge consisting of a series of short 'matches' of 4 to 7 boards. All pairs play the same boards at the same time. Results for each board are scored as for match-pointed duplicate pairs, and the results from all of the boards in a match averaged as on a typical club night. The averages are then converted to Victory Points (VPs) on a scale from 0 to 20, with 50% converting to 10 VPs, higher percentages to 11-20 VPs.

A further round of matches is then held, with the pairs having the highest number of Victory Points being drawn to play each other.

The VPs from each round are then aggregated, and the process continues for further matches. As the event progresses, pairs play other pairs with similar total VPs over the matches so far. At the end of the session the winners are the pair with the highest number of VPs from all matches.

Tactics for Swiss Pairs

The underlying scoring system in Swiss Pairs is match-pointed scoring. The tactics for bidding and play are therefore the same as for match-pointed duplicate pairs discussed above.

Appendix 1 – Trick Point to IMP conversions

(Law 78B)

Difference in trick points	IMPs	Difference in trick points	IMPs	Difference in trick points	IMPs
20-40	1	370-420	9	1500-1740	17
50-80	2	430-490	10	1750-1990	18
90-120	3	500-590	11	2000-2240	19
130-160	4	600-740	12	2250-2490	20
170-210	5	750-890	13	2500-2990	21
220-260	6	900-1090	14	3000-3490	22
270-310	7	1100-1290	15	3500-3990	23
320-360	8	1300-1490	16	4000+	24

Appendix 2 – Trick Score to MP and Cross-IMP comparisons

EW MPs = NS top MPs minus NS MPs.

EW IMPs = NS IMPs multiplied by -1.

Pair		Contract	By	Result	Trick Score		MPs		IMPs	
NS	EW				NS	EW	NS	EW	NS	EW
1	21	6C	N	=	920		12	0	+11.3 *	-11.3
2	22	4S	S	+2	480		10	2	+2.2	-2.2
3	23	4S	N	+1	450		8	4	+1.5 *	-1.5
4	24	5C	N	+1	420		6	6	+0.5	-0.5
5	25	5C	N	=	400		4	8	-0.2	+0.2
6	26	3S	S	+2	200		2	10	-5.0	+5.0
7	27	6S	S	-1		50	0	12	-10.3	+10.3

* See appendices 3 and 4 below for calculation of IMP scores for Pair 1 and Pair 3.

Appendix 3 – Cross-IMP calculation for Pair 1

Pair 1 versus pair ...	Trick score difference	IMPs
2	$920 - 480 = +440$	+10
3	$920 - 450 = +470$	+10
4	$920 - 420 = +500$	+11
5	$920 - 400 = +520$	+11
6	$920 - 200 = +720$	+12
7	$920 - (-50) = +970$	+14
Average =		+ 11.3

Appendix 4 – Cross-IMP calculation for Pair 3

Pair 3 versus pair ...	Trick score difference	IMPs
1	$450 - 920 = -470$	-10
2	$450 - 480 = -30$	-1
4	$450 - 420 = +30$	+1
5	$450 - 400 = +50$	+2
6	$450 - 200 = +250$	+6
7	$450 - (-50) = +500$	+11
Average =		+ 1.5