

# Manual Scoring – Neuberg

Even though double matchpointing is being used, computer scoring will sometimes produce results with decimal fractions. This reflects the use of the Neuberg Formula when an average score has been awarded or perhaps when there's been a fouled board or a split score.

While bridge mathematicians continue to argue about better methods, Neuberg is widely accepted as a way to spread the effect of gleaming enough points to award the average.

Let's say a normal board has 6 scores. A clear top will be 10 (two for every pair beaten) and an average will be 5. Available scores will be 10, 8, 6, 4, 2, 0 (total 30).

Now consider what happens when one of those 6 scores is an average. Those 5 points have to come from somewhere so the board will still be worth the same total matchpoints as all the other boards. The "manual" method is to take one from all the available scores. Scores awarded now would be 9, 7, 5, 5, 3, 1 (total still 30).

Notice the extremes. The best score on this board now only gets 9 while the worst score gets 1. On all the normal boards a clear top is 10 and a clear bottom 0.

With Neuberg, scores awarded are 9.8, 7.4, 5, 5, 2.6, 0.2 (total still 30).

For the really keen, the Neuberg formula is:

$$M = N/S(X+1)-1$$

where M = final matchpoint score

N = normal number of results on the board (here 6)

X = score allotted without reference to the other group

(here 8, 6, 4, 2 or 0 for one of the 5 good scores)

S = number of results in the group under consideration (here 5)

$$\text{So, } 9.8 = 6/5(8+1)-1$$