

## **WEY VALLEY GRADING SYSTEM (updated May, 2018)**

The system is based on the idea of a rank order of chess playing strength and, to ensure its relevance and reliability, it takes into account the strength of other players in the section being considered rather than, as with other grading systems, the strength of the players individually encountered in the event. It is calculated thus:

Step 1: the mean Wey Valley grade of players in a section is found. This gives some idea of whether the section is a "strong" one or "weaker".

Step 2: the players in the section concerned are listed in order of final score. Players achieving the centre (median) score (2.5 in a 5 round tournament, 3 in a 6 round event) are matched with a **comparison grade (Cg)** which consists of the group mean plus 10 points.

Step 3: Cgs. for score groups above this mean are then calculated thus:

30 points is added to the grade of the strongest player in the section. The difference between this figure and the Cg for the mean score group is calculated. This difference is then divided by the number of score groups above the centre score, (in a 5 round tournament, if the top player(s) score(s) 5/5, this would be 5). This gives a constant to be added on to find the Cgs for each score group above the mean.

A similar process is followed to find the Cgs for the score groups below the mean, but the steps will be smaller because we never allow a grade to fall below 40.

Step 4: Now the **Tournament Grade** and **New Grade (Ng)** can be calculated for each player.

The **Tournament grade (Tg) = Starting Grade (Sg) + (half the difference between the Sg and the Cg)**

**New Grade = Starting Grade + 1/5<sup>th</sup> of the above increment.** This final calculation is made in order to even out fluctuations in grade over the year.

Formulae for the above calculations are saved on past results tables and cut and pasted onto the top line of a new results list so that the formulae can be dragged down the results list.

A mathematician friend of mine calculated that what was going on is

$$Tg = \frac{1}{2} (Cg.+ Sg)$$

$$Ng = 1/10(9Sg+Cg)$$

The system is mathematically reliable if most players are regular contenders in our tournaments which tends to be the case. Its weakness is that if players miss tournaments but possibly play in outside events, they are not upgraded. To attempt to remedy this problem, when a new ECF (English Chess Federation) list is published, I compare our grades with the ECF list and if a player's ECF grade is higher than WV, the ECF grade becomes that child's starting grade for the next tournament.

Players of unknown strength always start with a grade of 40. If this is found (by the result of a player's first tournament) to be an underestimate, then a higher estimated starting grade is used.