

## **SA Relay Championships**

The state relay championships shall be held each year at a location determined by the organising club or group. Clubs may have in any of their club team's one team Member who is not a financial club member affiliated with Orienteering SA.

Classes and other technical requirements for the club relay championships are listed in the Course Specification document in section 2.1

Points for the relays are allocated on a club and group basis, which aims to improve upon a traditional points system (assigning a certain number of points for a team depending on each place) by achieving three key goals:

### **1) Balance potential points which can be scored across the clubs, regardless of size**

This goal aims to address the problem faced by smaller clubs, which cannot field as many teams as larger clubs even if they get all members to compete. This normally means it is much harder for the small club to get as many points as the large club, as fewer teams means fewer opportunities to get points.

Example Issue: TT has entered 10 teams, yet WA has only entered 5. Say each club performs evenly well, such that their teams get the same average points *per team*, say 5. Then, with a traditional points system, TT gets  $10 \times 5 = 50$  points whereas WA gets only  $5 \times 5 = 25$  points. Thus it appears that TT should easily beat WA on points, which seems unfair given that the clubs teams have performed evenly well (suggesting they should get the same number of points)

### **2) Reward more competitive groups with more points**

This goal aims to assign more points to teams in more competitive classes.

Example Issue: One team wins a group with no other teams competing. Another team wins a group with many teams competing. A traditional points system does not distinguish between these two performances, even though the second team likely had a much tougher time winning than the first.

### **3) Scale the points on the participation rate of the club**

This goal aims to encourage participation of the local members.

## **Description of the Point System**

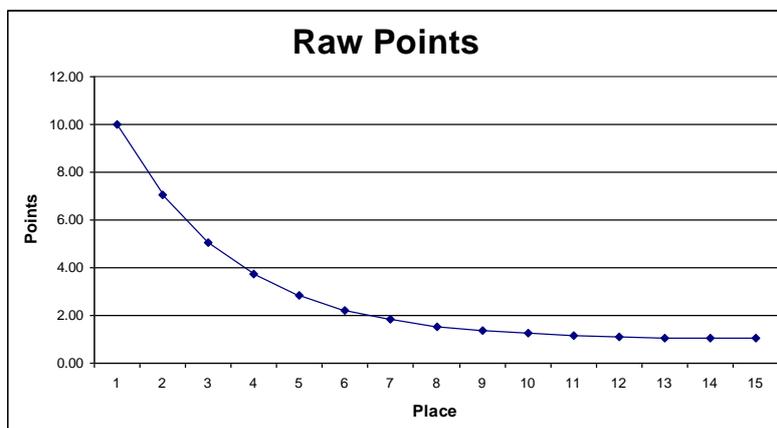
To address these goals the points are assigned using a number of scaling factors – based on the group a team competes in, the club a group is from, and then finally a membership scaling factor.

The process for determining the points is as follows:

## 1. Determination of the Raw Points Scored by a Team

Raw points for a team are assigned simply by a value of points for a certain place. ie: a team coming first scores 10 points, and points are reduced from this value for lower places. The values for each place are determined by the function

$$POINTS = 1 + 9e^{0.4(1-PLACE)}$$



## 2. Scaling of the Raw Points Scored by a Team

The Raw Points Value is then scaled by two factors; Group Factor and Club Factor, so a team ends up with points as follows

$$\text{Raw Points based on place} * \text{Group Factor} * \text{Club Factor}$$

The Group Factor for the team depends on which group they compete in, and how many other clubs are represented in that group. The Group Factor is equal to

$$\frac{\text{Number of clubs competing in the group}}{\text{Number of Clubs}}$$

This factor aims to address the second goal described above, rewarding more competitive groups. In this case the “competitiveness” of a Group is determined by the number of clubs which have entered a team in that Group.

For example: A group with all clubs represented will have a Group Factor of 1. If only three clubs out of a possible five are represented, the Group Factor will be 0.6.

The Club Factor for the team depends on the club the team is competing for, and the number of teams that club has entered. The Club Factor is equal to

$$\frac{\text{Average number of teams entered by clubs}}{\text{Number of teams entered by the team's club}}$$

This value gives an indication of how many teams a club has entered relative to the average. ie: if all teams enter the same number of teams, this value will be 1 for all club. If a club has entered less than the average amount, this value will be greater than

one, whereas if it has entered more than the average, it will be lower. This factor aims to address the first goal described above, balance potential points between the clubs

For example:

If TT has 10 teams, whereas WA has only 5 teams, then WA will have a Club Points Factor greater than that of TT. As such all WA teams will receive more points for a place than a TT team would. This is to balance the fact that in this scenario TT has more teams, and hence more opportunity to score points.

### **3. Total Points for a Club and Scaling by Membership**

The total points a club receives is equal to the sum of the points of all of its teams, scaled by the participation rate of that clubs membership in the relays. Ie:

$$\text{Total Points} = \text{Sum of all teams points} * \text{Membership Factor}$$

Where Membership Factor = Percent participation of the club

This factor rewards clubs that get a higher proportion of their membership to participate in the relays.

### **Record of Winning Clubs**

- 2006 Onkaparinga Hills & Tjuringa
- 2007 Tintookies
- 2008 Tintookies
- 2009 Tintookies
- 2010 Onkaparinga Hills
- 2011 Wallaringa
- 2012 Onkaparinga Hills
- 2013 Tintookies
- 2014 Onkaparinga Hills
- 2015 Yalanga
- 2016 Yalanga
- 2017 Onkaparinga Hills
- 2018 Yalanga
- 2019 Yalanga
- 2020 Yalanag
- 2021 Yalanga
- 2022 Onkaparinga Hills
- 2023 Yalanga
- 2024 Yalanga
- 2025 Tjuringa
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