

SOA Puzzle 49

14 Person Relay

At the 14 Person Relay, the recently formed Lochdoon OC team members, legs courses and times were:

Leg 1	- Green	Doris	W40	39:30
Leg 2	- Yellow	Alan	M12	21:05
	- Light Green	George	M35	38:37
	- Blue	Duncan	M18	36:38
Leg 3	- Yellow	Carrie	W16	22:16
	- Light Green	Mary	W50	43:52
	- Blue	Jock	M21	33:41
Leg 4	- Yellow	Fred	M16	16:34
	- Light Green	James	M18	23:38
	- Blue	Ivan	M40	35:47
Leg 5	- Light Green	Donald	M35	22:07
	- Light Green	Tam	M50	28:04
	- Light Green	Fiona	W21	28:16
Leg 6	- Green	Catriona	W18	38:40

The team's total time was 206:24 minutes and the 'dead time' - the difference between the first and last fifth leg finisher - was 24:30.

Can you work out:

1. Which runner's times on legs 2, 3, 4 and 5 counted towards the team total?
2. With the benefit of hindsight and given the same runner, leg and course combinations and the benefit of hindsight, what sequence of 2nd, 3rd, 4th and 5th leg runners would have given the shortest possible team time and the minimum dead time?

Rules: For those too young (or too old?) to remember the rules for the Scottish 14 Person Relay, introduced in 1991 by Derek Allison, were as follows.

- Leg 1 was a single runner on a mass start Green course.
- The Leg 1 runner handed over to three Leg 2 runners, one on Yellow, one on Light Green and one on Blue.
- The Leg 2 runners each handed over to one Leg 3 runner, who could be on Yellow, Light Green or Blue. Similarly, each Leg 3 runner handed over to one Leg 4 runner, who could be on Yellow, Light Green or Blue. (Legs 2, 3 and 4 runners had to complete 3 Yellow, 3 Light Green and 3 Blue courses between them.)
- The Leg 4 runners handed over to Leg 5 runners, all of whom were on Light Green.
- The last of the three Leg 5 runners handed over to a single Leg 6 Green course runner.

Thanks to Dave McQuillen from SOLWAY for this fantastic puzzle.

