Stage 3 ★
Mixed Selection 1 - Solutions

1. Minutes in between

Two complete hours takes you to 13:41. Then, another 19 minutes takes you to 14:00, and another 2 minutes to 14:02.

As there are 60 minutes in an hour, the two hours is the same as 2 x 60 = 120 minutes, so the total time is 120 + 19 + 2 = 141 minutes.

2. Stair climb

Boris has to run up 99 steps, and runs up 5 in each unit of time, so it takes him 99 ÷ 5 = 19.8 units of time to reach the top.

Spike has to run up 78 steps, and runs up 4 in each unit of time, so it takes him 78 ÷ 4 = 19.5 units of time.

Percival has to run up 61 steps, and runs up 3 in each unit of time, so it takes him 61 ÷ 3 = 20 1/3 units of time.

Therefore they finish in the order Spike, Boris, Percival.

3. Race time

Gabriel finished the race in 30 s. There are 60 x 60 = 3600 seconds in an hour, so Frank finished the race in 36 s.

Therefore, Gabriel won the race by 6 s.

4. Millennium leap

The numbers of multiples of 4 between 2001 and 3001 is 250. However, the following years will not be leap years: 2100, 2200, 2300, 2500, 2600, 2700, 2900, 3000. This leaves 242 leap years.

5. Flying down under

The clock time in Melbourne when Fred arrived was 32 hours (one complete day and 8 hours) ahead of the clock time in London when he left. So he arrived at 7:30pm on Wednesday.