



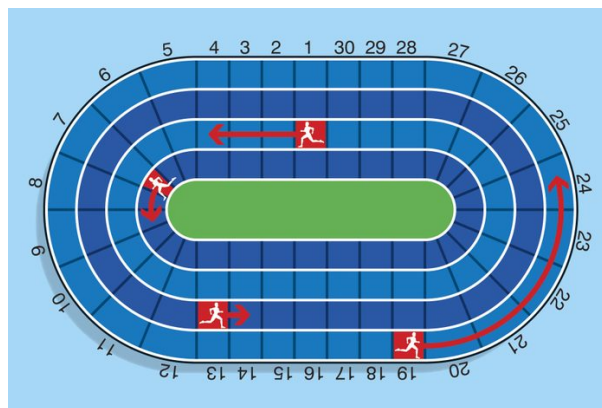
Welcome to this week's Maths Challenge!

Solutions must be explained in detail, responses with just the answer may be ignored.

Drop your solution in the box in the staffroom by Tuesday.

## Year 8 and below

Four runners are at different positions around an athletics track. The track is divided into thirty sectors as indicated by the numbers round the periphery. Each runner moves forward the number of sectors indicated by the red arrow in front of them, in the same time. When they are next all in the same sector, which sector number will it be?



## Year 9 and above

You have a four-digit, positive integer. Now you remove one of the four digits. The three digits that are left, in their original order from the four digit number, make a three-digit number. The sum of the four-digit number and the three-digit number is 6031. What is the four-digit number?