

The triathlon is a sport which consists of three consecutive races, a swim, a bike race and finally a long run.

Adam, Ben and Charles all want to qualify for the Olympic triathlon.

Here are their results from a trial race:

	Swimming 1500m	Cycling 40km	Running 10km	TOTAL
Adam	19:12	1:04:33	32:13	1:55:58
Ben	21:19	1:05:28	31:54	1:58:41
Charles	22:31	1:03:22	30:12	1:56:05

Which athlete would you expect to burn the most calories?

Adam, Ben and Charles weigh approximately 70kg each

It is estimated that athletes of this weight burn energy at the following rates:

- **Swimming** at 4.5km/h burns 600 kcal per hour.
- **Cycling** at 30km/h burns 900 kcal per hour.
- **Running** at 15km/h burns 1100 kcal per hour.

Assuming that the amount of calories burnt is **directly proportional** to the athletes' speed, estimate how many calories each of the three athletes burnt during his race.

Are you surprised?

How can you explain your results?

Do you think the modelling assumptions are valid?