

Cycling On ...

ACTIVITY ONE

It's the last week in November, and Okaihau School's year 8 class is off on a tramping and cycling camp.

Groups B and C go by bus to the start of their tramp. Their bikes are transported on trailers. Group A ride to their first destination, Trefoil Park.

The teacher in the lead car times Rebecca, the fastest group A student rider, for each stage of the ride.

Stage	Start time	Finish time	Total distance in kilometres
1	10.00	10.08	3.6
2	10.18	10.26	7.2
3	10.35	10.48	11.9
4	10.59	11.09	16.2
5	11.26	11.30	17.4
6	12.16	12.32	24.8
7	12.39	1.00	32

- How far does Rebecca ride for each stage?
 - How long does each stage take?
- How long does it take Rebecca from the time she leaves school until she reaches Trefoil Park?
- How much time does Rebecca spend riding?
 - What fraction of the total time is this?
- What is Rebecca's average speed? Give your answer in kilometres per hour.
 - Which stage of the trip is the fastest?
 - Why do you think some stages are slower than others?



ACTIVITY TWO

The following morning, group A leave Trefoil Park at 9.09 a.m. The first riders arrive at Awarua School, covering a distance of 8.2 kilometres, at 9.29 a.m. They set off again at 10.00 a.m. and arrive at Twin Bridges at 10.17 a.m. The odometer on the lead car registers 14.7 kilometres.

1. What is the fastest riders' average speed for the first stage?
(Round this to a whole number.)
2.
 - a. How far is it from Awarua to Twin Bridges?
 - b. What is the average speed for this stage (rounded)?
3. What is the fastest riders' average speed for the ride from Trefoil Park to Twin Bridges?

**ACTIVITY THREE**

It's group B's turn to ride. They have to cycle back to Trefoil Park. They leave Twin Bridges at 11.27 a.m. The fastest group takes 20 minutes to reach Awarua School. They set off again at 12.27 p.m. and reach Trefoil Park at 12.50 p.m.

1. What time do the fastest riders in group B arrive at Awarua School?
2.
 - a. How long does it take them to cycle the next 8.2 kilometres to Trefoil Park?
 - b. What is their average speed over this section (rounded to one decimal place)?

**ACTIVITY FOUR**

Thursday is group C's turn to ride. They leave Trefoil Park at 9.38 a.m. and arrive at Awarua School at 10.07 a.m. The fastest riders reach Twin Bridges at 10.52 a.m., a ride of 21 minutes.

1.
 - a. What time do they leave Awarua School?
 - b. What is their average speed for this section?
2. What was the fastest riders' average speed (rounded) for their ride from Trefoil Park to Twin Bridges?
3. Group A and group C both rode from Trefoil Park to Twin Bridges.
 - a. Which group had the fastest riders?
 - b. Show as a percentage how much faster these riders were than the fastest riders in the other group.
4. Which group would you have liked to be in? Give reasons for your answer.