AIM YEAR 7 MATHEMATICS ASSESSMENT PROGRAM 2003

Mathematics Extended Tasks

Question Sheet

All work is to be completed on the Answer sheet in the Mathematics Test Booklet.

Task 1 – School Camp

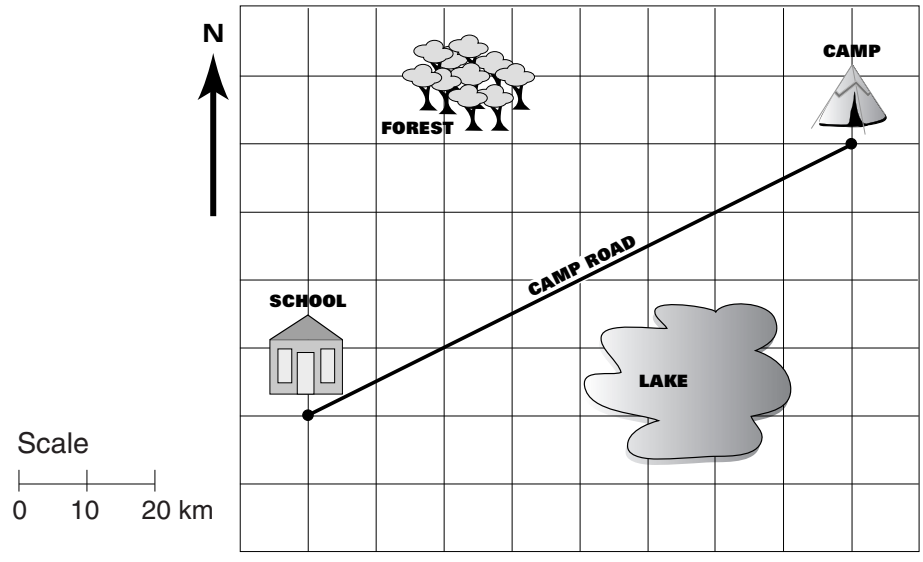
A class of Year 7 students is going on a camp. This is the timetable for the first day of the camp.

Time	Activity
8:15 am	Bus leaves School
11:00 am	Arrive at Camp
12:30 pm	Lunch
1:30 pm	Bushwalking

1 How much time did the journey take from the time the bus left School until it arrived at Camp?

2 How much time would elapse from School to Camp if the bus spent 42 minutes at a rest stop along the way?

This map shows the bus route from School to Camp.



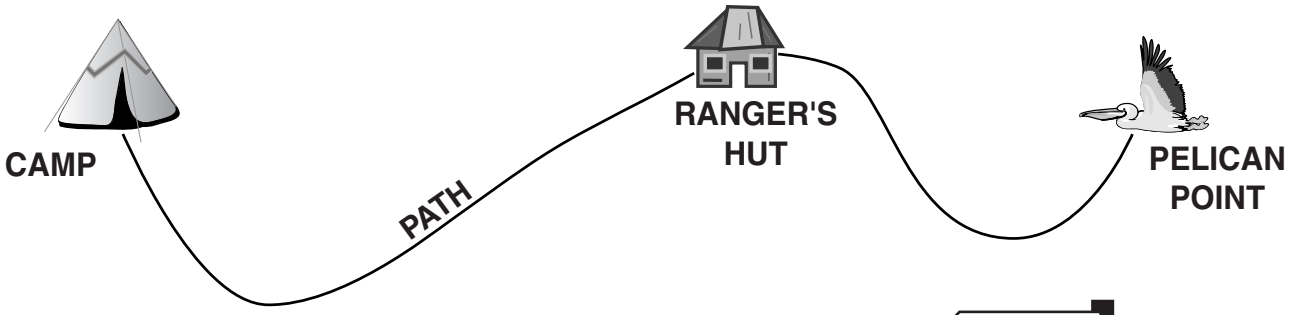
3 Estimate the length of Camp Road to the nearest 10 km, using the scale shown.

4 Draw an alternate road from the School to the Camp that is between 135 km and 145 km long.

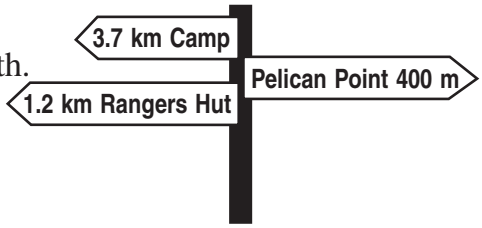
Do this on the map in your test booklet.

After lunch, the class walked from Camp to Pelican Point.

This map shows the path the class took.



On the way to Pelican Point they saw this sign post on the path.



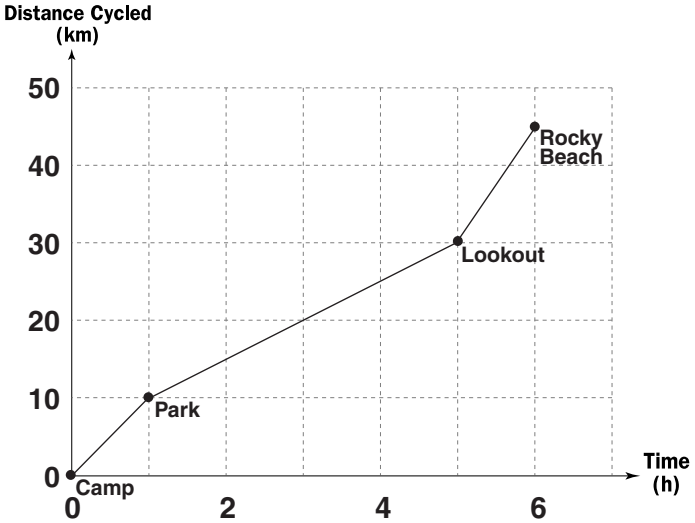
5 What is the distance from Camp to Pelican Point in metres?

6 Draw a cross (X) on the path to show the position of the sign post.

Do this on the path in your test booklet.

The next day the class went on a bicycle ride from Camp to Rocky Beach.

This graph shows the distance the class cycled over time.



7 How much time did it take the class to cycle from Camp to Rocky Beach?

8 What is the distance from Camp to Rocky Beach?

9 What was their average speed from Camp to Rocky Beach?

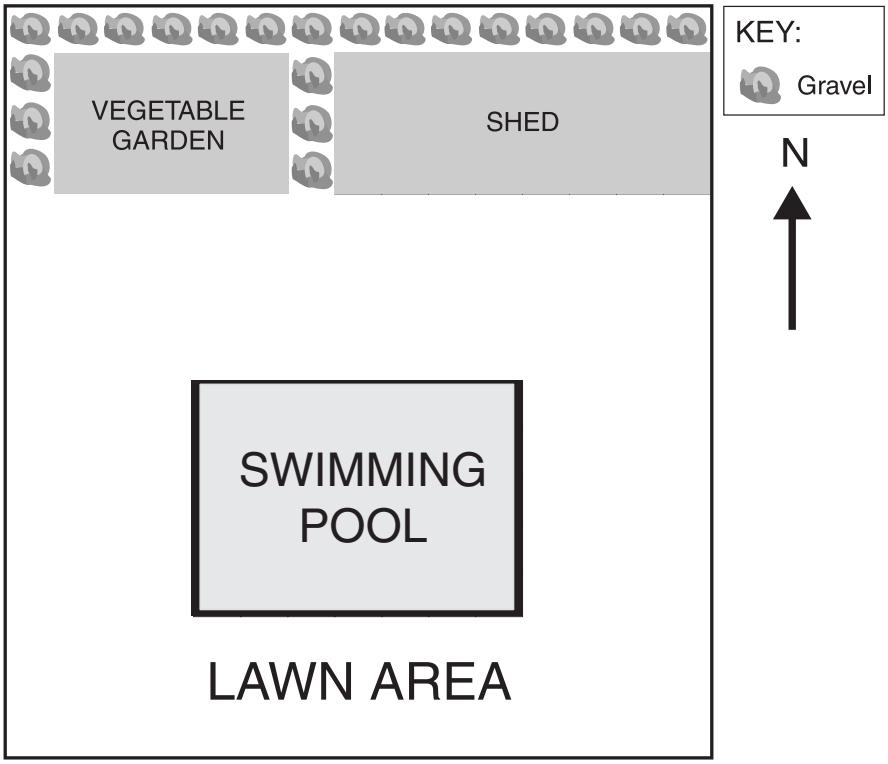
Bill Green, the sports coach, completed the same bicycle ride in 4 hours.
He cycled fastest from Camp to the Lookout, and more slowly from the Lookout to Rocky Beach.

10 Draw his possible travel graph.
Label the Lookout and Rocky Beach on the graph.

Do this on the graph in your test booklet.

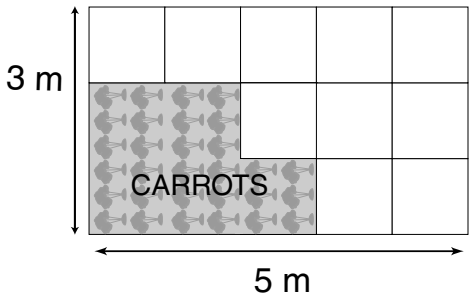
Task 2 – Jo's Backyard

This is a diagram showing how Jo has designed her backyard.



The diagram below shows details of the vegetable garden.

Jo has planted carrots in her vegetable garden as shown.



11 What fraction of the vegetable garden is planted with carrots?

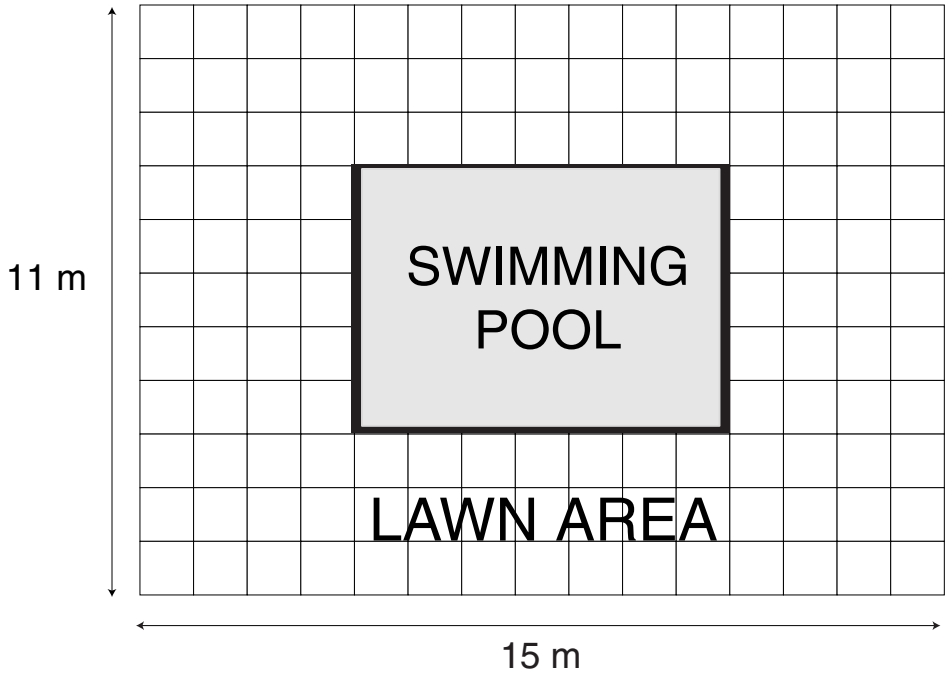
Jo is going to plant peas in 40% of the remaining area.

12 Shade in the area for planting peas.

Do this on the diagram in your test booklet.

13 After the peas are planted, what percentage of the total vegetable garden is not planted?

This is a diagram showing the pool and lawn area.



14 A one metre wide path is to be laid around the entire edge of the pool.
The path will have right-angled corners.
Shade this path around the pool.

Do this on the diagram in your test booklet.

15 What is the area of the path?

16 Square tiles that are 50 cm per side are to be used for the path.
How many of these tiles are needed to cover the whole path?

17 What is the area of the pool?

18 The pool is 1.5 m deep.
What volume of water is needed to completely fill the pool?
Your answer must be in cubic metres.

19 Jo's garden hose supplies water at the rate of 1 500 litres per hour.
(Note: 1 000 litres = 1 cubic metre)
How long will it take to completely fill the pool?