Task 2 Noticeboards

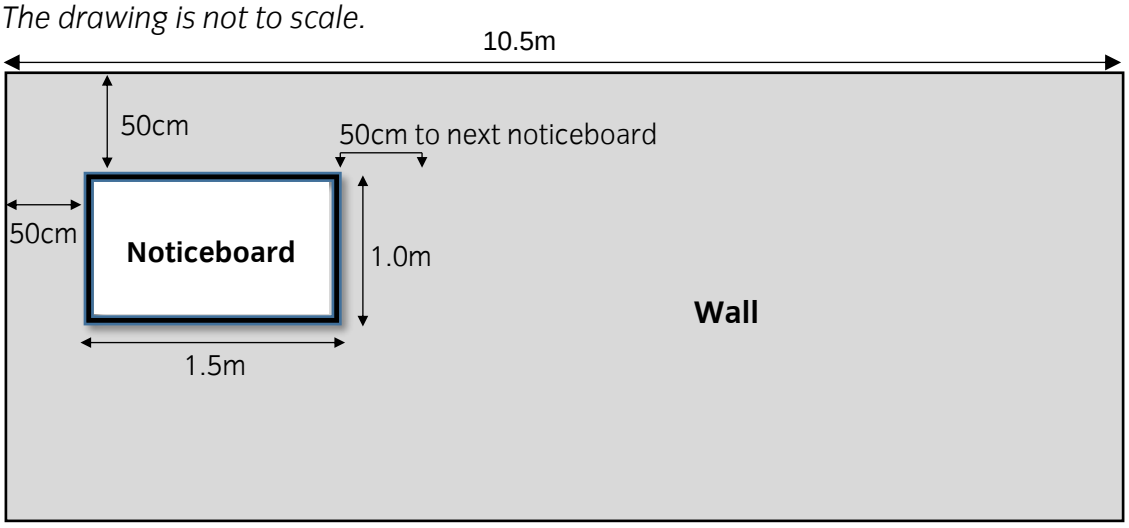
There are **15** marks available for this task.
You should check your work as you go along.

Introduction

The manager of a sports centre wants to put up some noticeboards.

He makes the following rough drawing to show how to hang the noticeboards and the space needed between them.

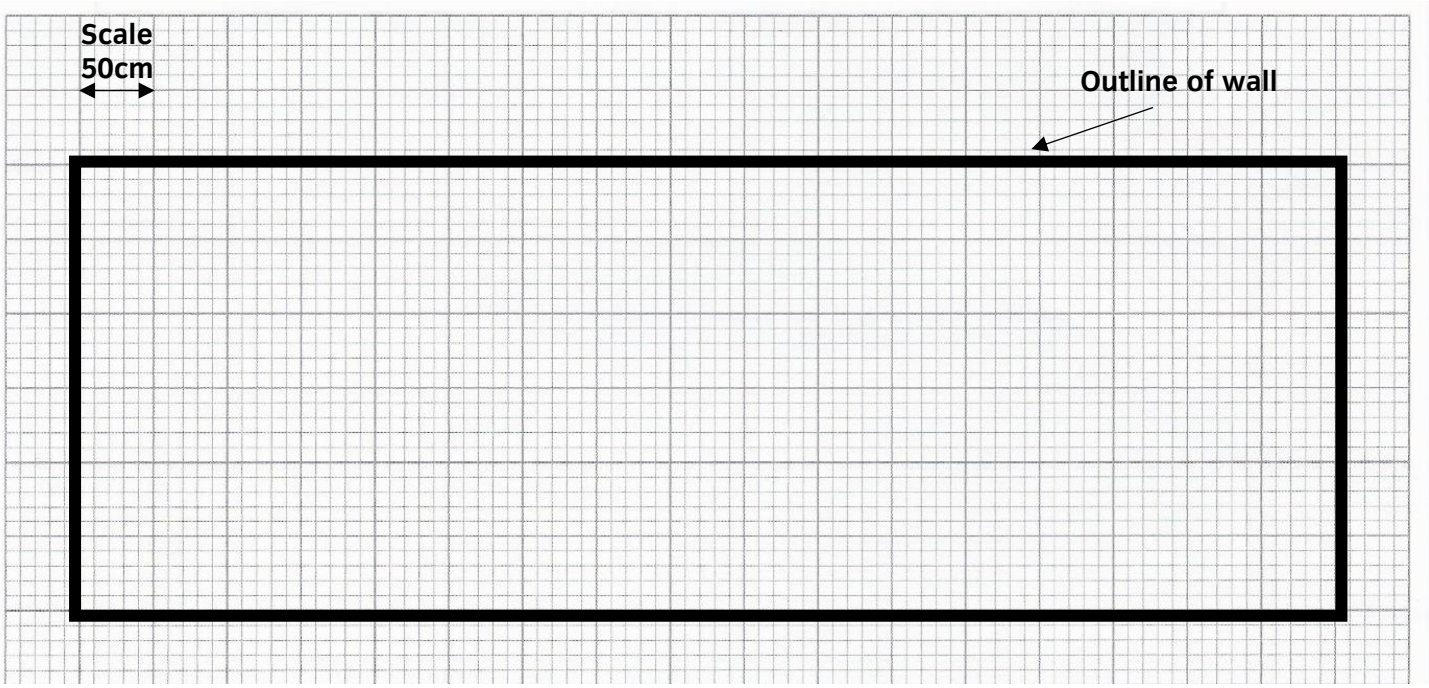
The drawing is not to scale.



2A

Show how many noticeboards will fit along the length of a wall.
You only need to show **one row.** Label your diagram.

Use the graph paper below.



Space for working

Number of noticeboards that fit along the wall _____

(6 marks)

2B

The company that supplies the noticeboards gives the manager the following information

Cost of the noticeboards is £60 per board, plus a fixed £50 delivery charge

The manager decides to order 12 boards for the sports centre.

Work out how much he will have to pay in total to the company, including delivery.

Show your working

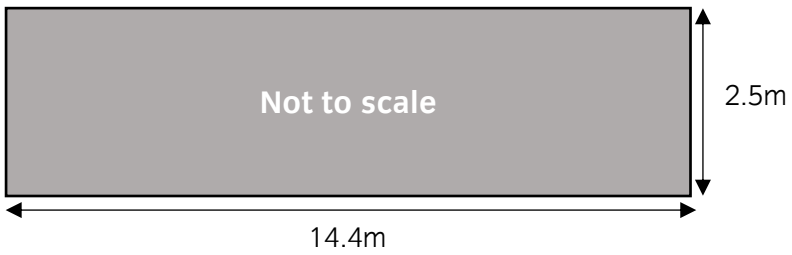
Total price £ _____

(3 marks)

2C

The manager asks a handyman to paint a different wall before putting up some of the noticeboards.

The sketch diagram below shows the height and length of the wall.



Work out the area of the wall. Remember to include units in your answer.

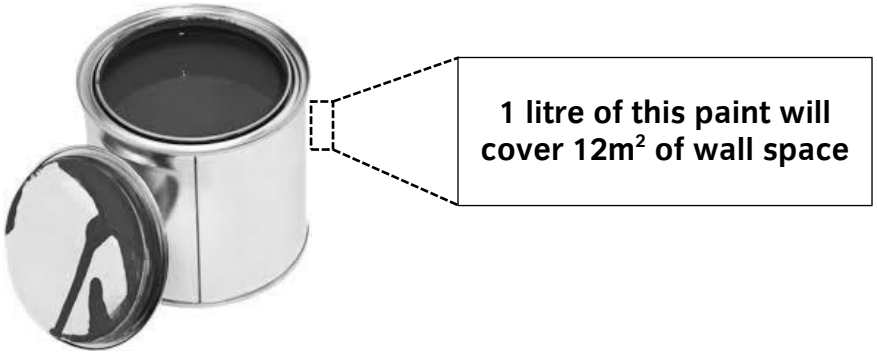
Show your working

Area of wall _____

(3 marks)

2D

The picture below shows how much wall space a litre of the paint will cover.



Use your answer from **2C** to work out how many litres of paint it will take to cover the wall.

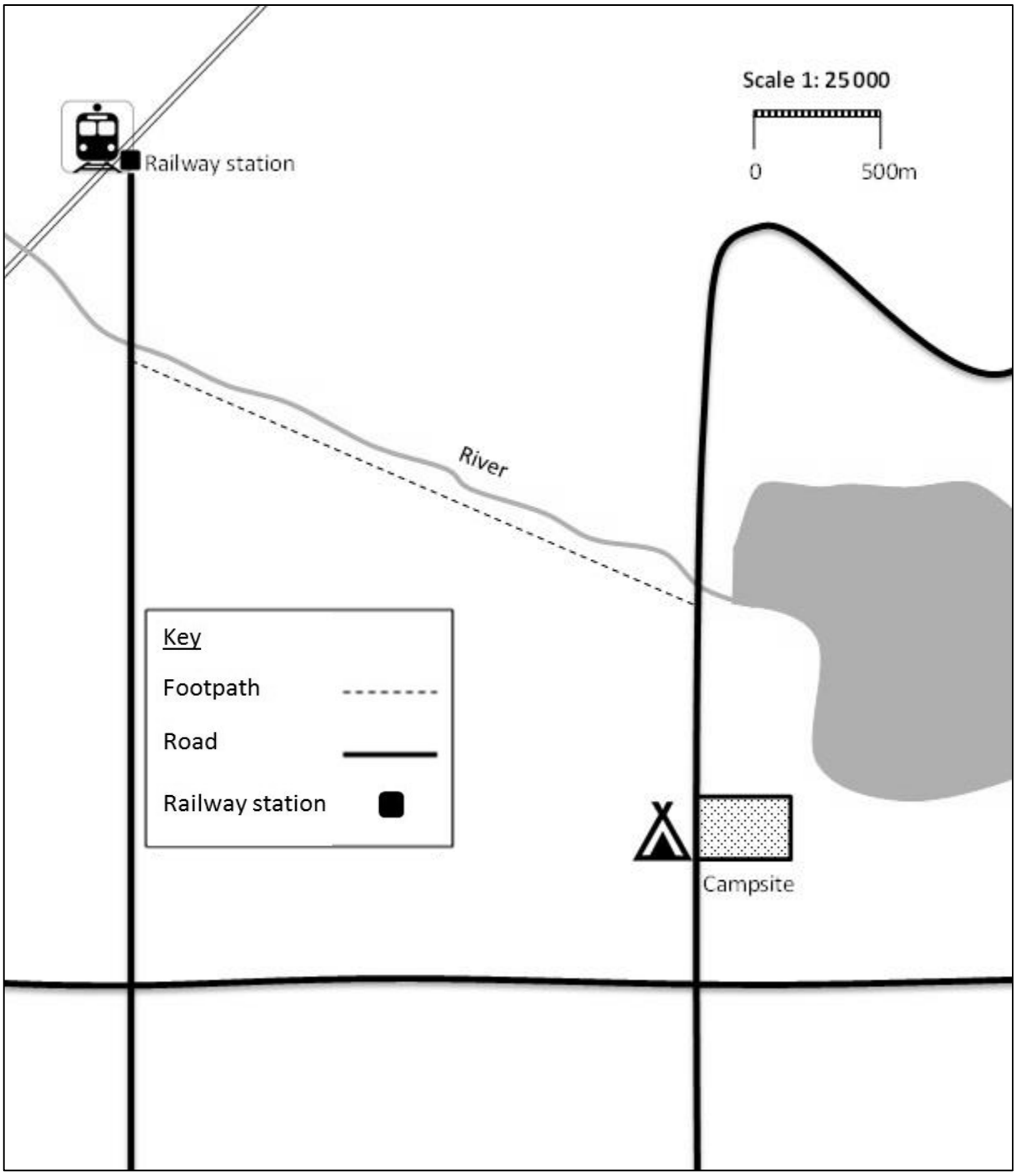
Show your working

_____ litres of paint

(3 marks)

1F

You will walk from the railway station to the campsite.



Measure the distance of the shortest route using roads and footpaths only.
Give your answer in **kilometres**.

Space for working

Distance of shortest route _____kilometres

(4 marks)

1G
It takes you 20 minutes to walk each mile.

How many minutes will it take you to walk from the railway station to the camp site by the shortest route?

1 kilometre = $\frac{5}{8}$ of a mile

Space for working

Number of minutes _____

(3 marks)

Task 1 Orienteering

There are **25** marks available for this task.
You should check all your work as you go along.

Introduction
This task is about a sport called orienteering.
You want to go orienteering.

1A
A local club sends out a leaflet about their next event.
Look at the leaflet on the next page.

Use the map to plan the best route to complete the course
Draw your route on the map.

(3 marks)

1B
Give **two** reasons why you chose this route.

Reason 1

Reason 2

(2 marks)

Leaflet

What is orienteering?

- Orienteering is about running or walking around a course finding checkpoints.
- You need to go to every checkpoint once.
- You can go to the checkpoints in any order.
- You do not need to stay on the roads or paths.

Key

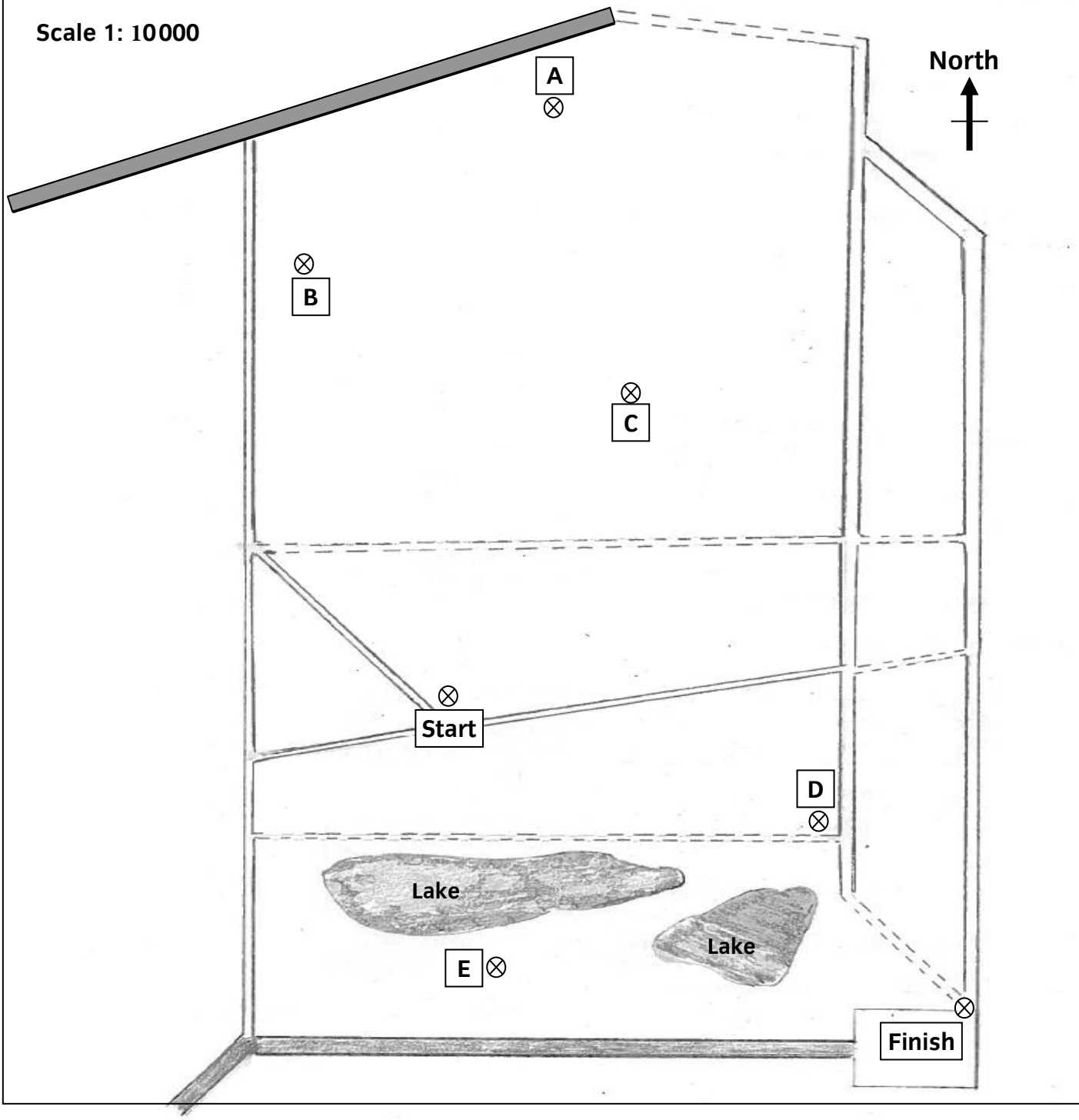
road

paths

checkpoint

Map of the course

Scale 1: 10000



1C

Measure the distance of each stage between the checkpoints on your route.
Write the checkpoints for each stage and their distances on the table below.

Space for working

Checkpoints			Distance of stage (cm)
Start	to		
	to		
	to		
	to		
	to		
	to	**Finish**	

(3 marks)

1D

Use your answers from **1C** and the scale on the map to work out the actual distance of each stage between the checkpoints on your route.

Put units on your answers.

Show your working

Checkpoints			Actual distance of stage
Start	to		
	to		
	to		
	to		
	to		
	to	**Finish**	

(5 marks)

1E

You need to allow approximately one hour to complete each **6km** of your route.

This formula works out how long each stage will take.

$$T = \frac{d}{s} \; X \; 60$$

Where T = time in minutes
d = distance in kilometres
s = kilometres per hour

Use the formula and your answers from **1D** to work out how long each stage will take.

Write your answers to the nearest minute.

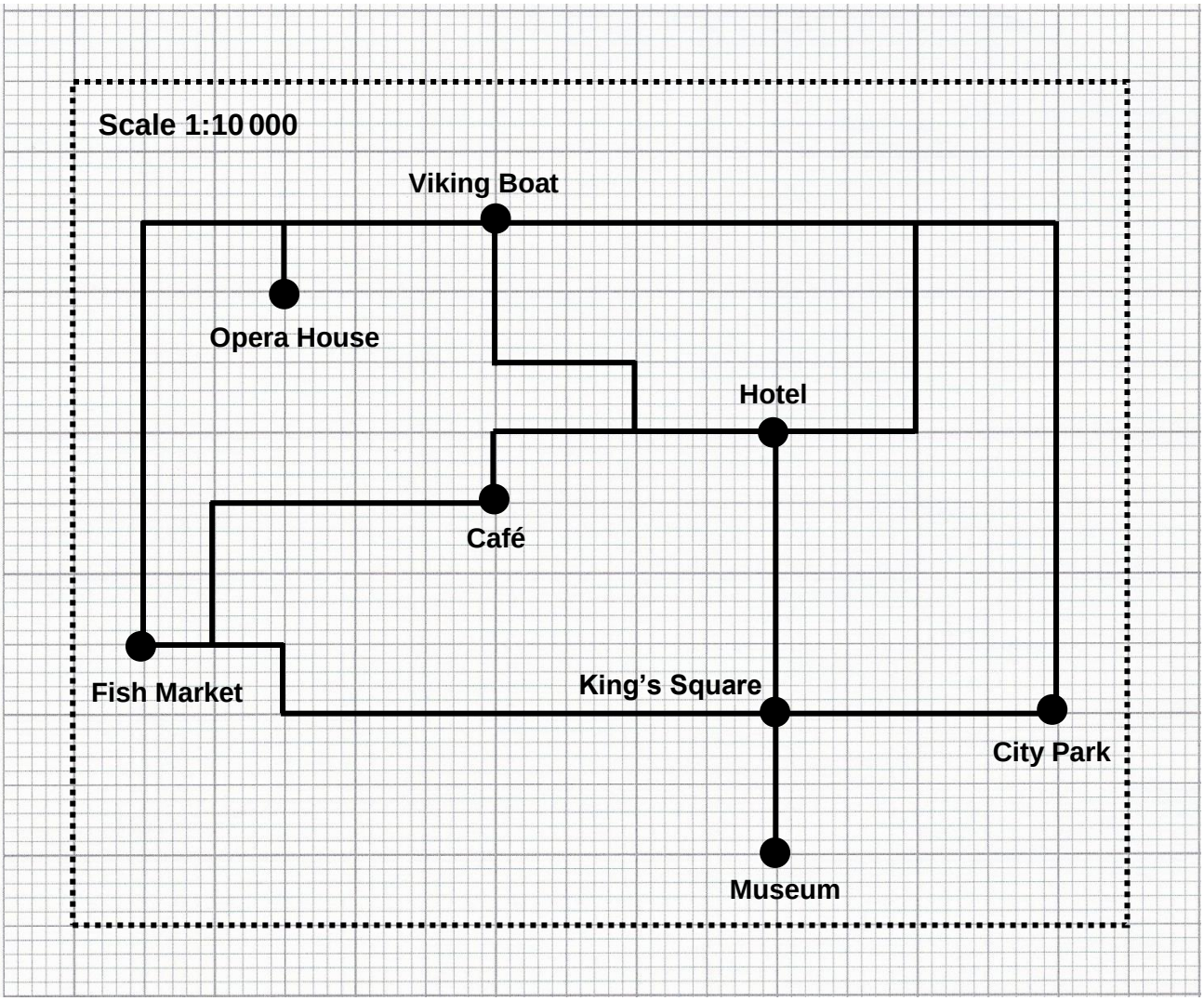
Show your working

Checkpoints			Time for stage (minutes)
Start	to		
	to		
	to		
	to		
	to		
	to	**Finish**	

(5 marks)

1E

You and your friend will go on a sightseeing trip in the city.
You plan a route to start and finish at the hotel.
You want to visit the City Park, Viking Boat and Fish Market. You want to go to the café for a meal.
This is a simplified scale plan of the city.



Plan your route showing the order of the places you want to visit.
Work out the distances between each place on your route **in metres**.

Work out the total distance of your route **in kilometres**.
Complete the table.

Space for working

Order	Places to visit	Distance
Start	**Hotel**	
First		**m**
Second		**m**
Third		**m**
Fourth		**m**
Finish	**Hotel**	**m**
	Total distance	**km**

(6 marks)

1F
You need to know how long it will take to walk your route.

A typical person can walk at a speed of **5 km in one hour**.

Work out how long it will take to walk between each place to visit.
Round your answers to the nearest minute.

Complete the table.

Show your working

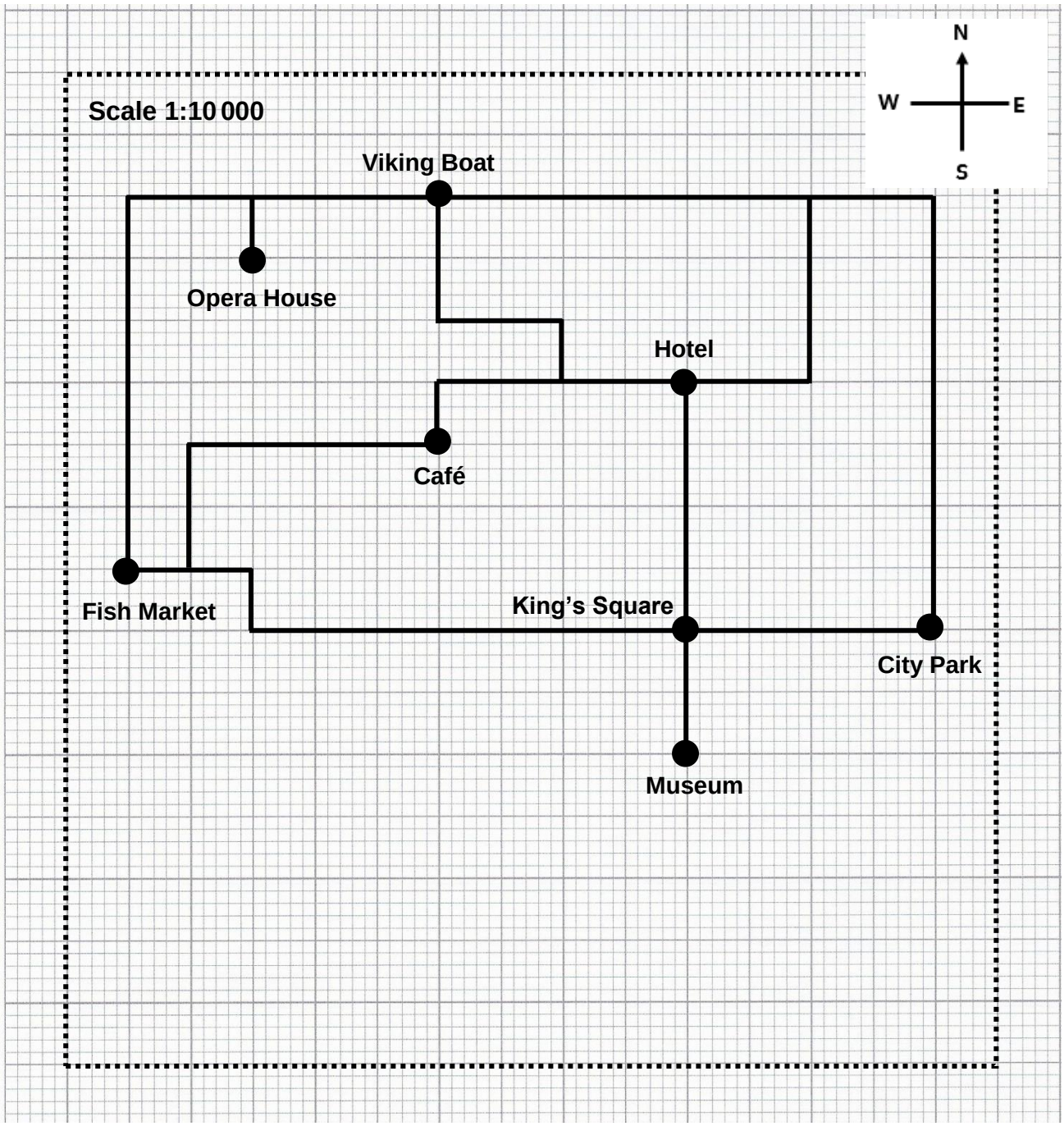
Route from	Time (minutes)
Hotel to first place	
First place to second place	
Second place to third place	
Third place to fourth place	
Fourth place back to hotel	

(4 marks)

1G

You are going to see a concert. The concert hall is 500m west of the museum.
Mark the concert hall clearly on the plan.

Label the diagram.



(4 marks)

LEVEL 2
Task 2 The Garden

Emma has a rectangular plot of land measuring 8m by 6m.

She wants to fit 3 raised flower beds in this plot.

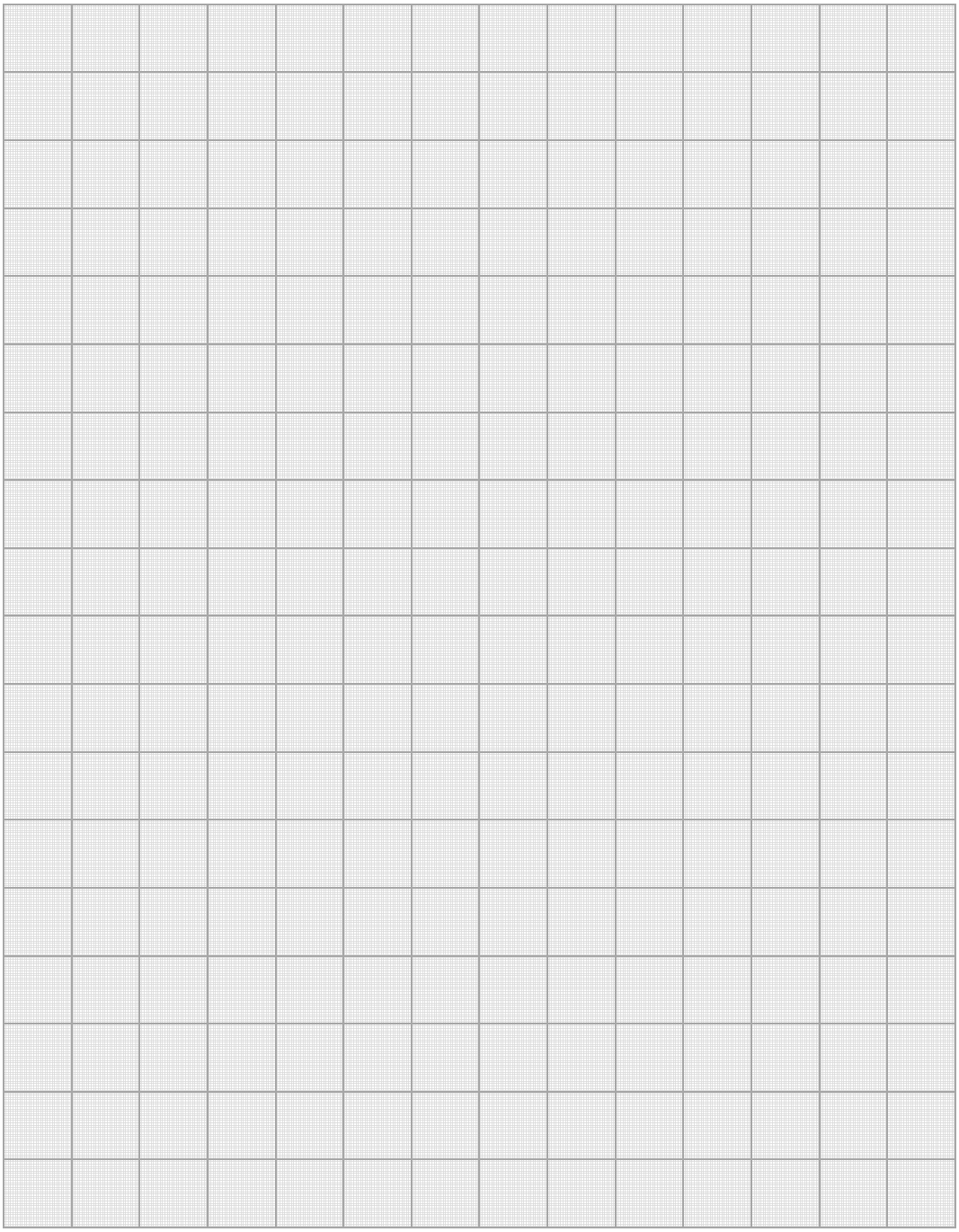
Each raised bed is 3m long and 1.5m wide.

There needs to be a pathway at least 1m wide around each raised bed.

2a Using the graph paper opposite, draw a scale plan of the plot with the 3 raised beds suitably positioned.

Use a scale of 1:50.

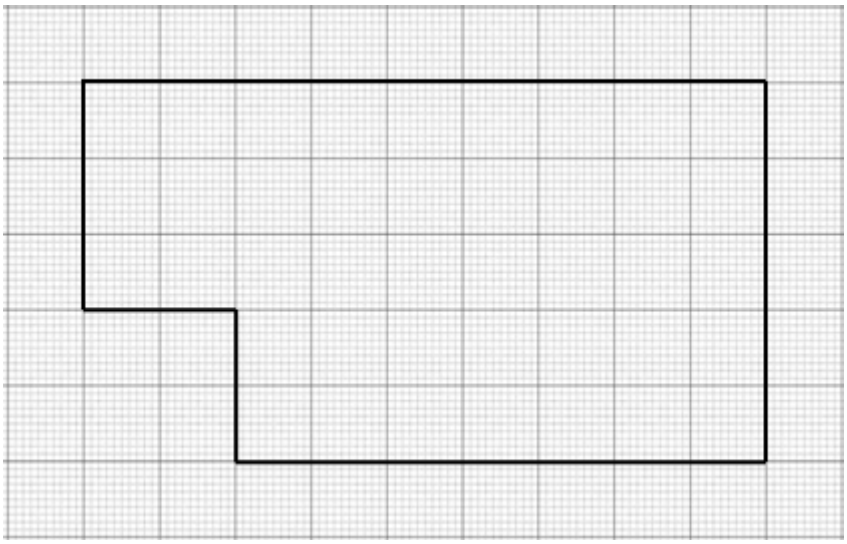
Show working clearly below with sketches if used. **(5 marks)**



The scale drawing below shows a plan of the storeroom in Ella's café.

Ella intends to paint the floor area with hardwearing floor paint.

Plan of Storeroom



Scale 1:50

Ella has a tin of floor paint that will cover up to 18 m².

1c Ella thinks this will be enough paint to give the floor 2 coats of paint.

Is she correct? **(7 marks)**

Use calculations to justify your answer on the opposite page.

1c