

# High School Mathematics Test 2014

Year  
7

## Grids and Location

Calculator Allowed  
Test

### Skills and Knowledge Assessed:

- Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)

Name \_\_\_\_\_

Answer all questions in the spaces provided on this test paper by:

Writing the answer in the box provided.

or

Shading in the bubble for the correct answer from the four choices provided.

Show any working out on the test paper. Calculators are **not** allowed.

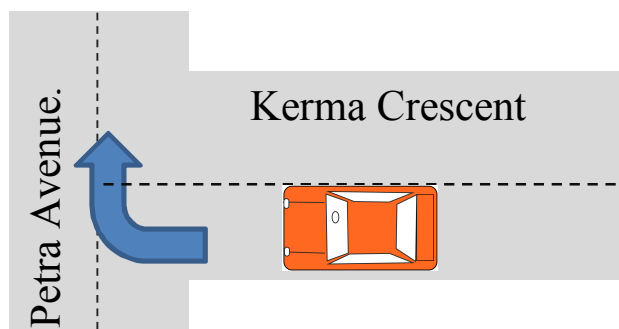
1. Suzie and Karl are facing one another.

Karl is facing north-west.

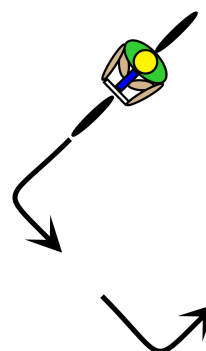
What direction is Suzie facing?

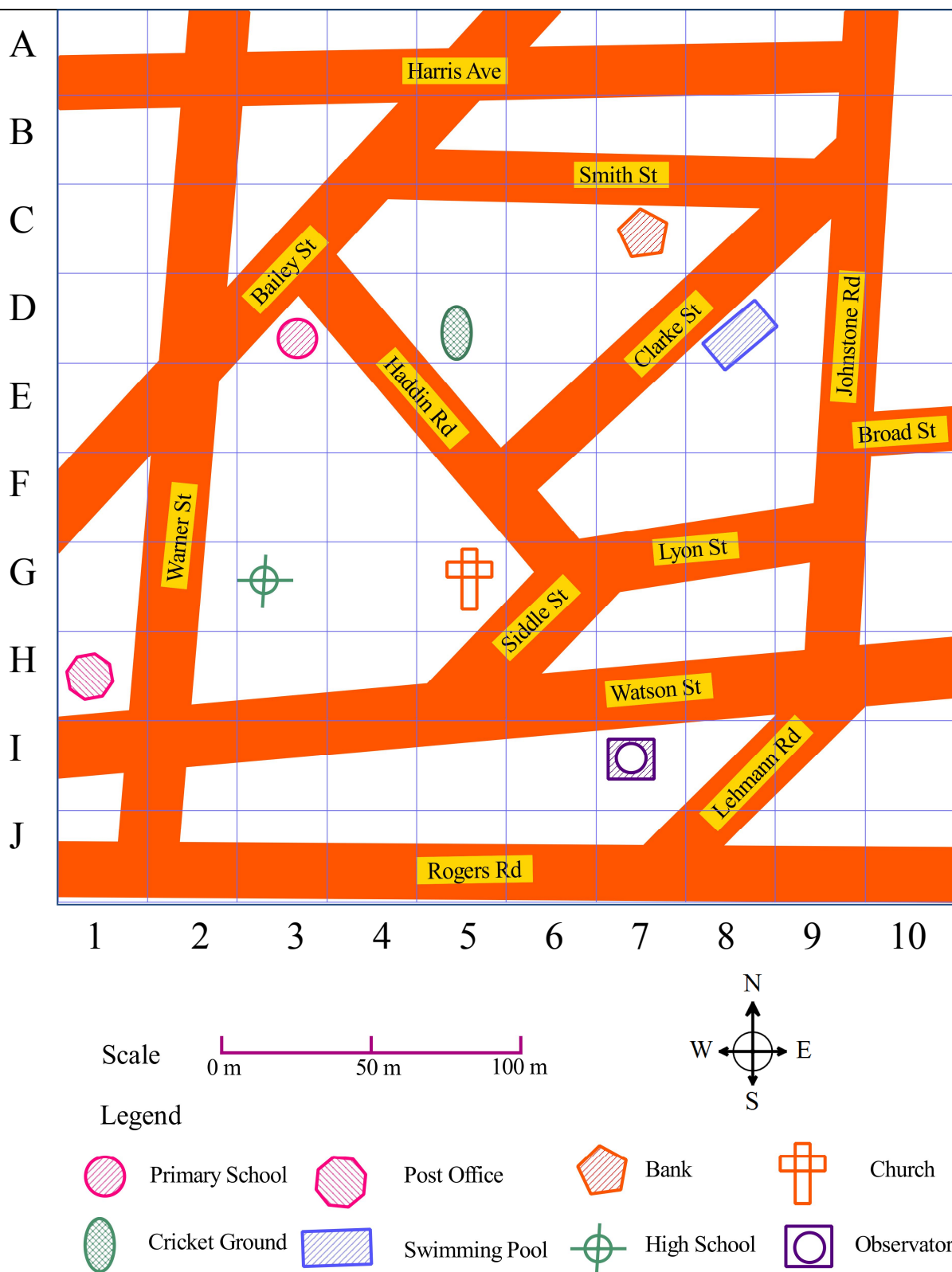
2. The car is travelling west along Kerma Crescent and is about to turn right into Petra Avenue.  
What direction will it be travelling after it has turned right?

- ☐ north  
☐ north-west  
☐ south  
☐ west



3. Greg was riding his bike in a south-west direction.  
He then made two 90° left hand turns.  
What direction was he travelling then?





Questions 4 – 8 refer to the map above of Hayley town centre.

4. The High School is at grid reference 3G.  
What can be found at grid reference 7C?

5. What is the grid reference of the Primary School?

☐ 3D

☐ 4C

☐ 5D

☐ 7C

6. What feature is north of the Church and east of the Primary School?

☐ Cricket Ground.

☐ High School.

☐ Observatory.

☐ Swimming Pool.

7. What feature is south-east of the church?

8. What direction is the Post Office from the Cricket Ground?

☐ NE

☐ NW

☐ SE

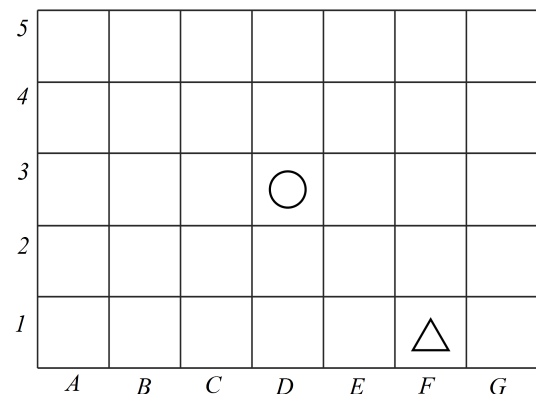
☐ SW

9. The scale on a map is 1 cm : 10 km. Two towns are 45 cm apart on the map. How far apart are they in reality?

 km

10. The circle is at grid reference D3.

What is the grid reference of the triangle?

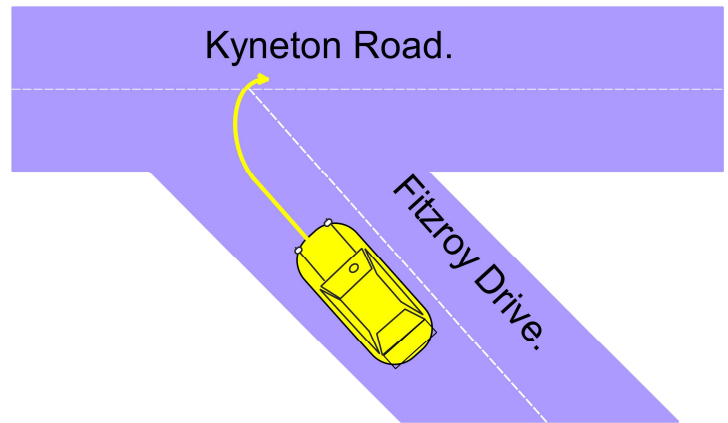


11.

Justin is driving north-west on Fitzroy Drive and is about to make a sharp right turn into Kyneton Road.

What direction will he be travelling after the turn?

- ☐ north
- ☐ east
- ☐ south-east
- ☐ south

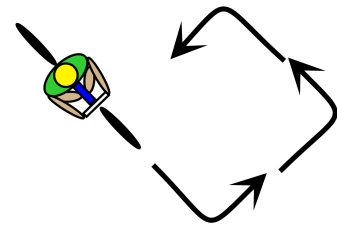


12.

Oliver was riding his bike in a south-east direction.

He then made three  $90^\circ$  left hand turns.

What direction was he travelling then?

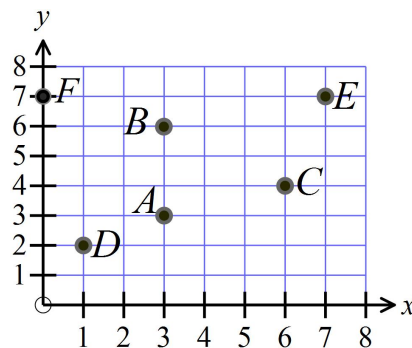


13.

The scale on a map is 3 cm : 100 km. Two towns are 400 km apart. How far apart are they on the map?

 cm

Questions 15 – 16 refer to the grid shown.



14.

Which point is located at (3, 6)?

- ☐ A                      ☐ B                      ☐ C                      ☐ D

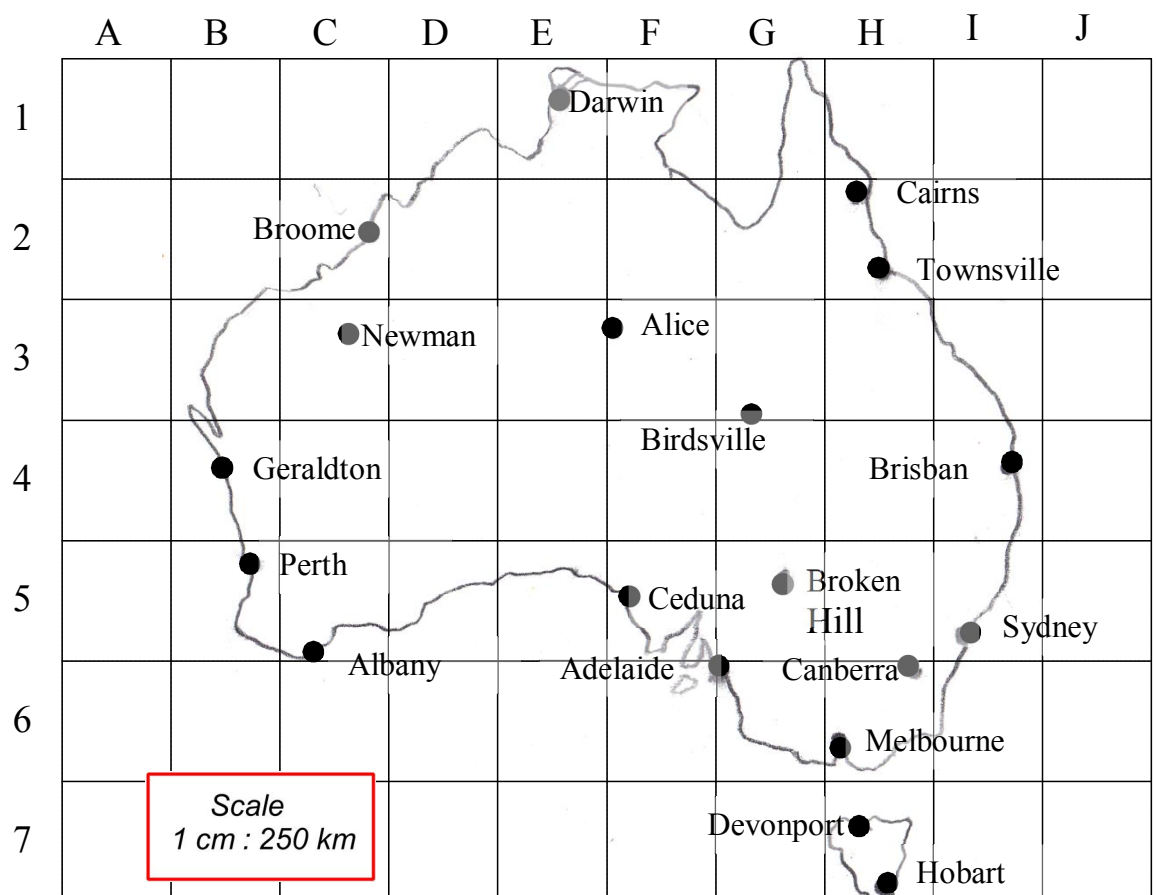
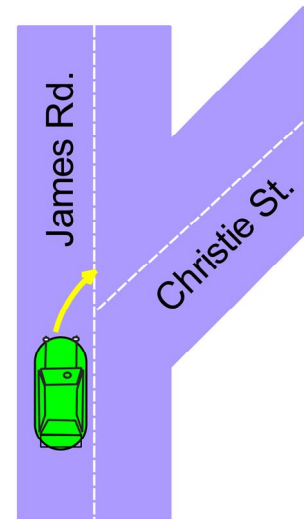
15.

What are the coordinates of point C?

16.

Mabel is driving south-west on James Rd and is about to veer right into Christie St.

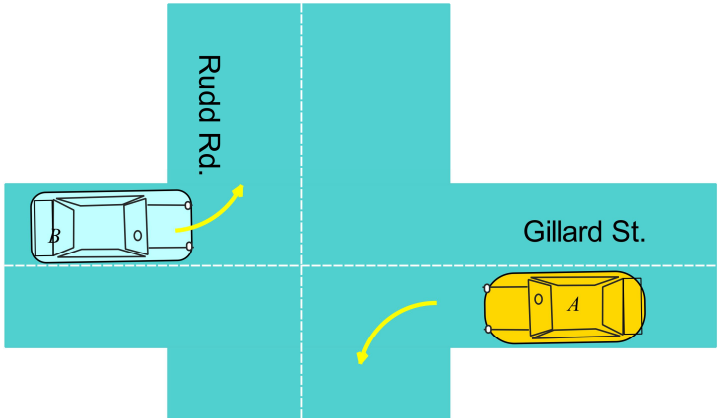
What direction will her car be travelling after the turn?



Questions 17 to 20 refer to the map of Australia.

17.

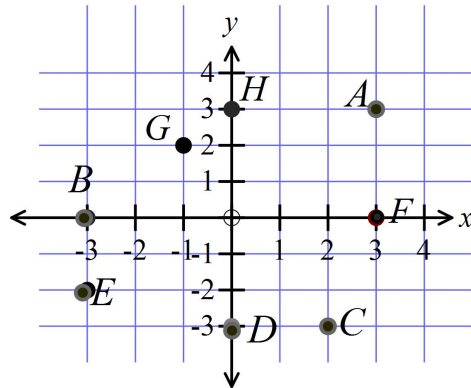
What direction is Adelaide from Devonport?

18.	Newman has a grid reference of C3. What is the grid reference of Townsville? <div></div>
19.	How far is Perth from Birdsville? <div></div> km.
20.	What city is about 1 500 km NW of Canberra? <input type="checkbox"/> Alice Springs. <input type="checkbox"/> Birdsville. <input type="checkbox"/> Brisbane. <input type="checkbox"/> Broken Hill.
21.	What is the distance and direction from Ceduna to Newman?  Newman is <div></div> km <div></div> of Ceduna.
22.	<p>Car A is travelling in a south-west direction along Gillard St and is turning left into Rudd Rd.</p> <p>Car B is travelling in the opposite direction along Gillard St and is also turning left into Rudd Rd.</p> <p>What direction is car B travelling after the turn?</p> <div><input type="checkbox"/> north-east <input type="checkbox"/> north-west <input type="checkbox"/> south-east <input type="checkbox"/> south-west</div> <div></div>

23. The scale on a map is 1 : 2 500. Two houses are 4 cm apart on the map. How far apart are they in reality?

metres

Questions 25 – 26 refer to the grid shown.



24. Which point is located at (-3, 0)?

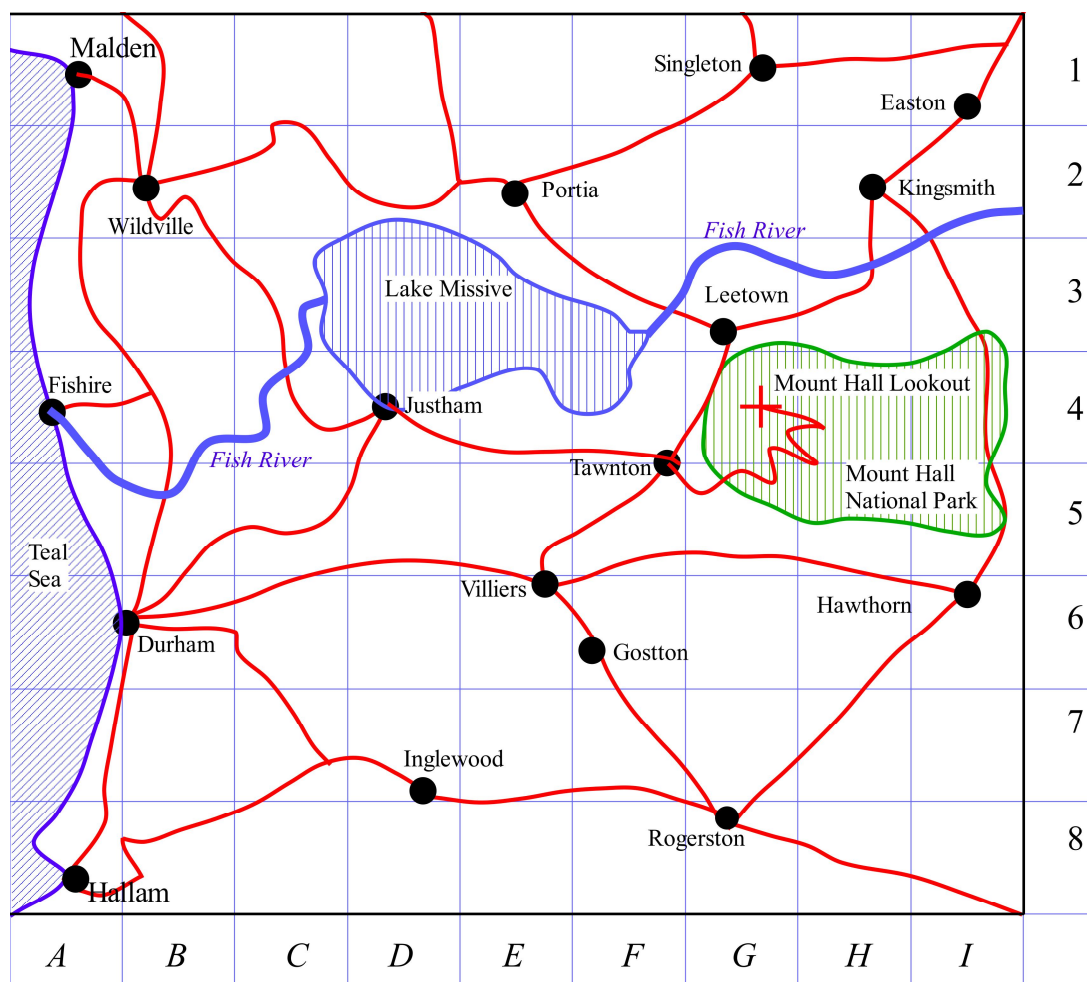
☐ B

☐ D

☐ F

☐ H

25. What are the coordinates of point E?



Scale 1 cm : 50 km

Questions 26 – 30 refer to the map of the Teal Coast.

26. Give the name of the town which is west of Kingsmith and NW of Hawthorn.

27. What town is on the coast of the Teal Sea, NW of Justham?

- ☐ Durham.
- ☐ Fishire.
- ☐ Hallam.
- ☐ Malden.



28. Edward swam from Justham, due north across Lake Missive?  
How far did he swim?

km.

29. Which two towns are both about 400 km from Tawnton?

and

30. A plane flies from Malden to Rogerston, taking two hours for the trip.  
What speed and direction does it fly?

It flew in a  direction at a speed of  km/h.

# High School Mathematics Test 2014

## Grids and Location ANSWERS

### Non Calculator Section ( 1 mark each)

1. Suzie and Karl are facing one another.

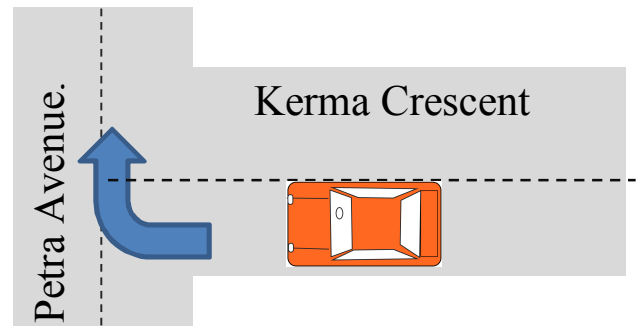
Karl is facing north-west.

What direction is Suzie facing?

South-east

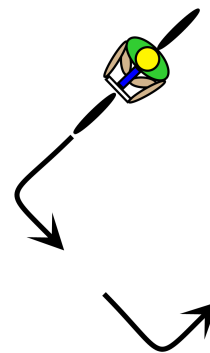
2. The car is travelling west along Kerma Crescent and is about to turn right into Petra Avenue.  
What direction will it be travelling after it has turned right?

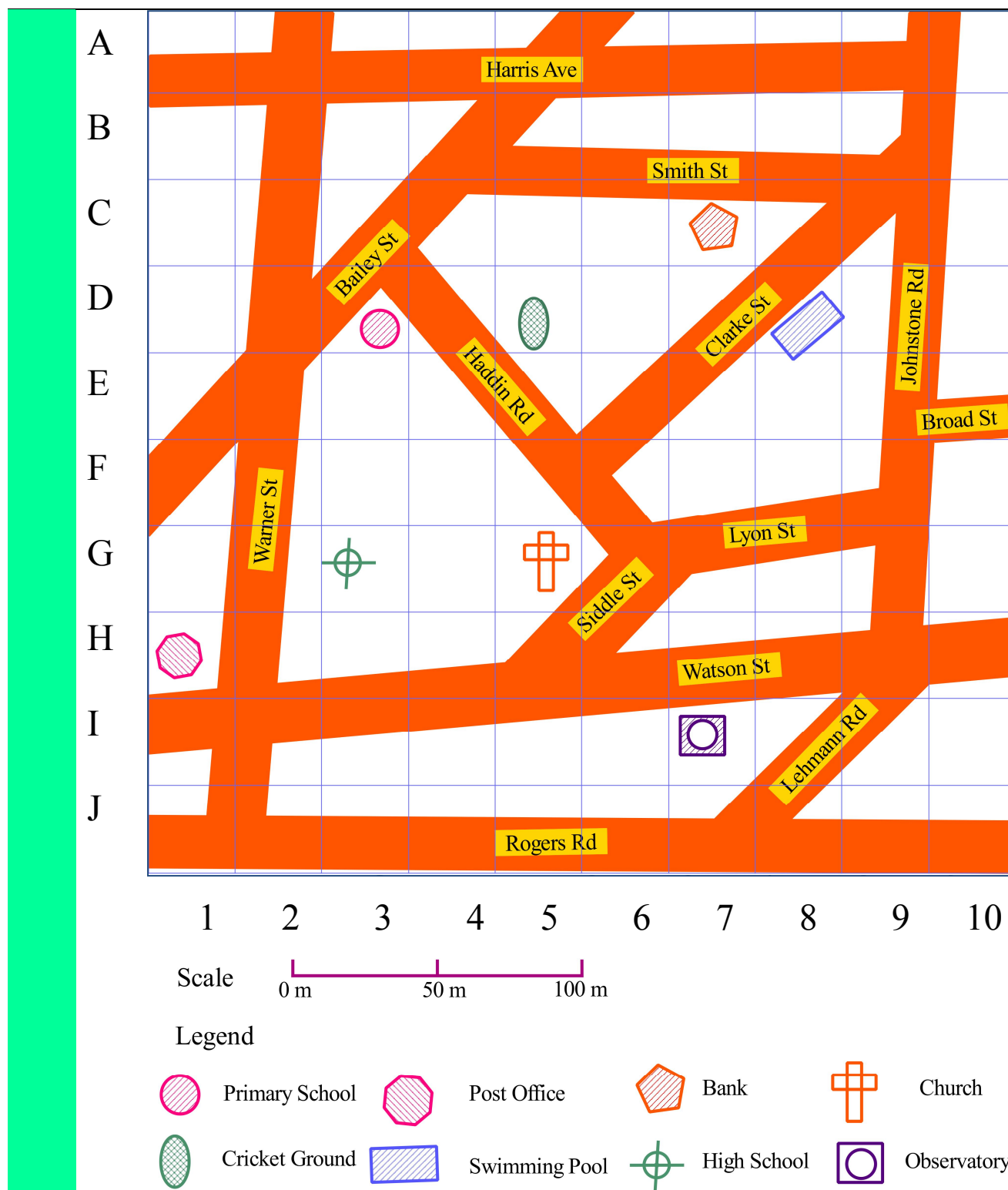
- ☒ north  
☐ north-west  
☐ south  
☐ west



3. Greg was riding his bike in a south-west direction.  
He then made two 90° left hand turns.  
What direction was he travelling then?

North East





Questions 4 – 8 refer to the map above of Hayley town centre.

4. The High School is at grid reference 3G.  
What can be found at grid reference 7C?

Bank

5. What is the grid reference of the Primary School?

☒ 3D

☐ 4C

☐ 5D

☐ 7C

6. What feature is north of the Church and east of the Primary School?

☒ Cricket Ground.

☐ High School.

☐ Observatory.

☐ Swimming Pool.

7. What feature is south-east of the church?

Observatory

8. What direction is the Post Office from the Cricket Ground?

☐ NE

☐ NW

☐ SE

☒ SW

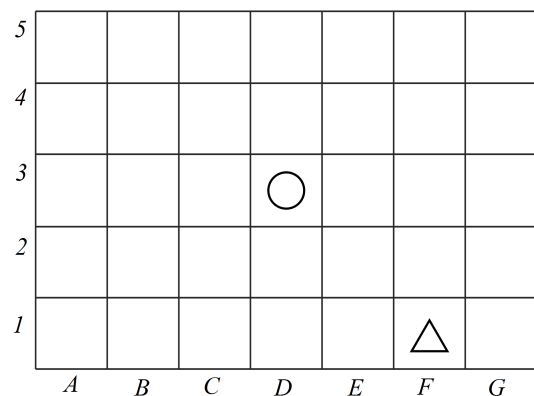
9. The scale on a map is 1 cm : 10 km. Two towns are 45 cm apart on the map. How far apart are they in reality?

450 km

10. The circle is at grid reference D3.

What is the grid reference of the triangle?

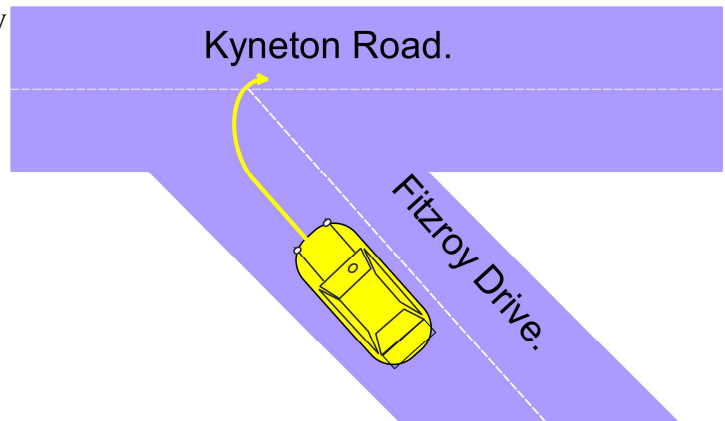
F1



11. Justin is driving north-west on Fitzroy Drive and is about to make a sharp right turn into Kyneton Road.

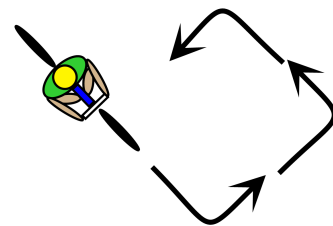
What direction will he be travelling after the turn?

- ☐ north  
☒ east  
☐ south-east  
☐ south



12. Oliver was riding his bike in a south-east direction. He then made three  $90^\circ$  left hand turns. What direction was he travelling then?

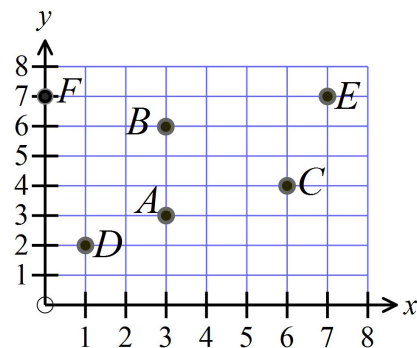
South West



13. The scale on a map is 3 cm : 100 km. Two towns are 400 km apart. How far apart are they on the map?

12 cm

Questions 15 – 16 refer to the grid shown.



14. Which point is located at (3, 6)?

- ☐ A      ☒ B      ☐ C      ☐ D

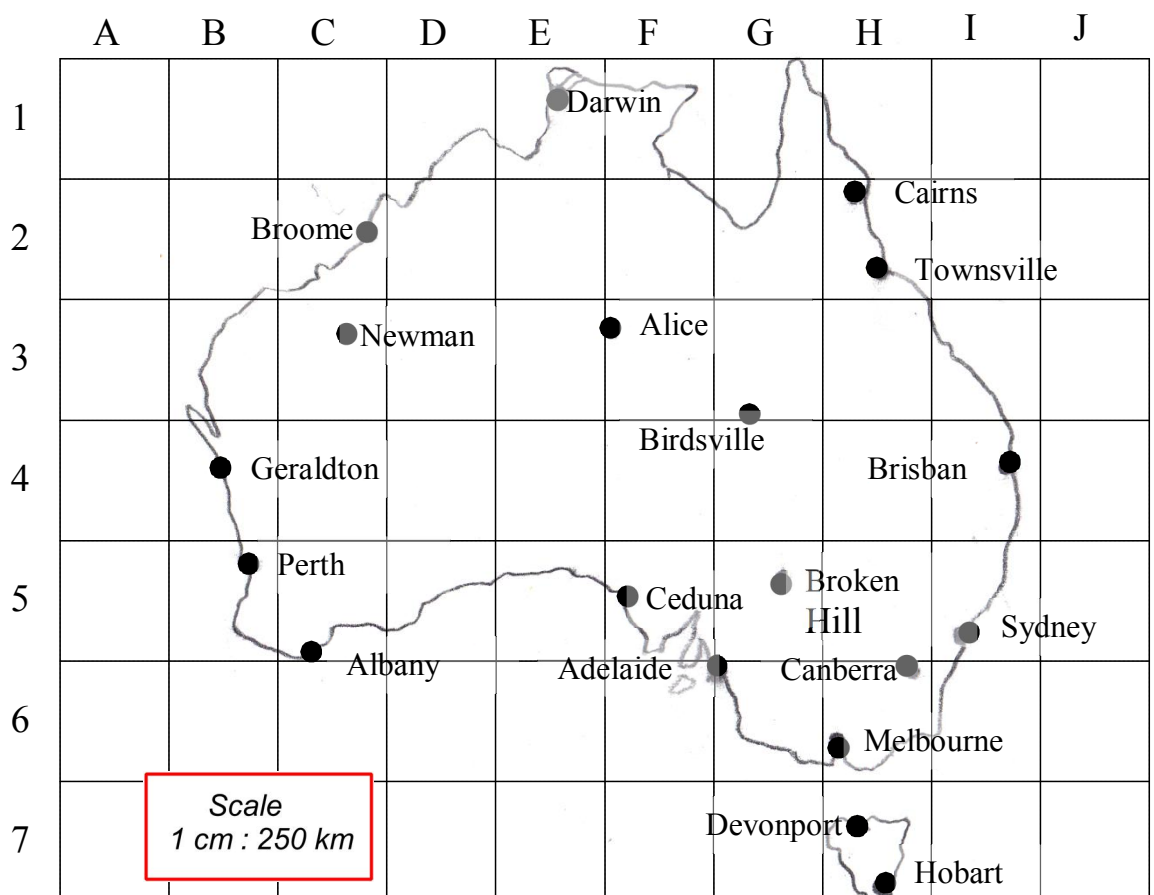
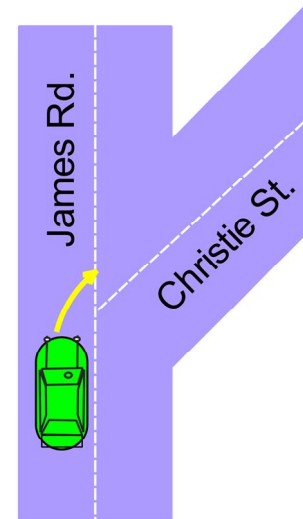
15. What are the coordinates of point C?

(6,4)

16. Mabel is driving south-west on James Rd and is about to veer right into Christie St.

What direction will her car be travelling after the turn?

West



Questions 17 to 20 refer to the map of Australia.

17. What direction is Adelaide from Devonport?

North West

18. Newman has a grid reference of C3.  
What is the grid reference of Townsville?

H2

19. How far is Perth from Birdsville?

Accept answers with the range

1625 to  
1750

km.

20. What city is about 1 500 km NW of Canberra?

- ☒ Alice Springs.  
☐ Birdsville.  
☐ Brisbane.  
☐ Broken Hill.

21. What is the distance and direction from Ceduna to Newman?

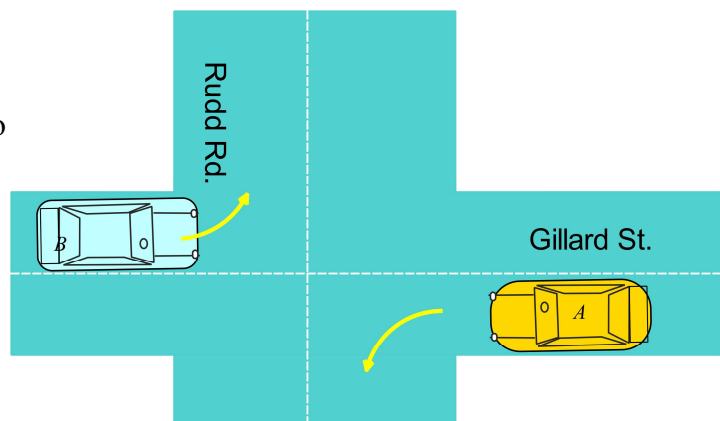
Newman is 1250 km NW of Ceduna.

22. Car A is travelling in a south-west direction along Gillard St and is turning left into Rudd Rd.

Car B is travelling in the opposite direction along Gillard St and is also turning left into Rudd Rd.

What direction is car B travelling after the turn?

- ☐ north-east  
☒ north-west  
☐ south-east  
☐ south-west

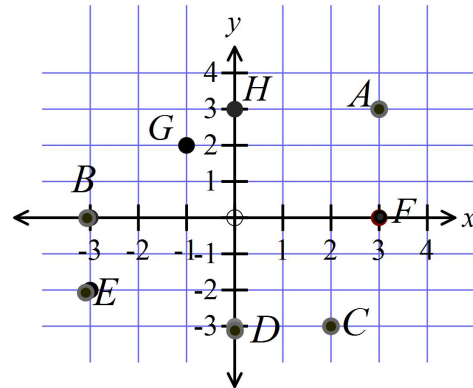


23. The scale on a map is 1 : 2 500. Two houses are 4 cm apart on the map. How far apart are they in reality?

100

metres

Questions 25 – 26 refer to the grid shown.



24. Which point is located at (-3, 0)?

☒ B

☐ D

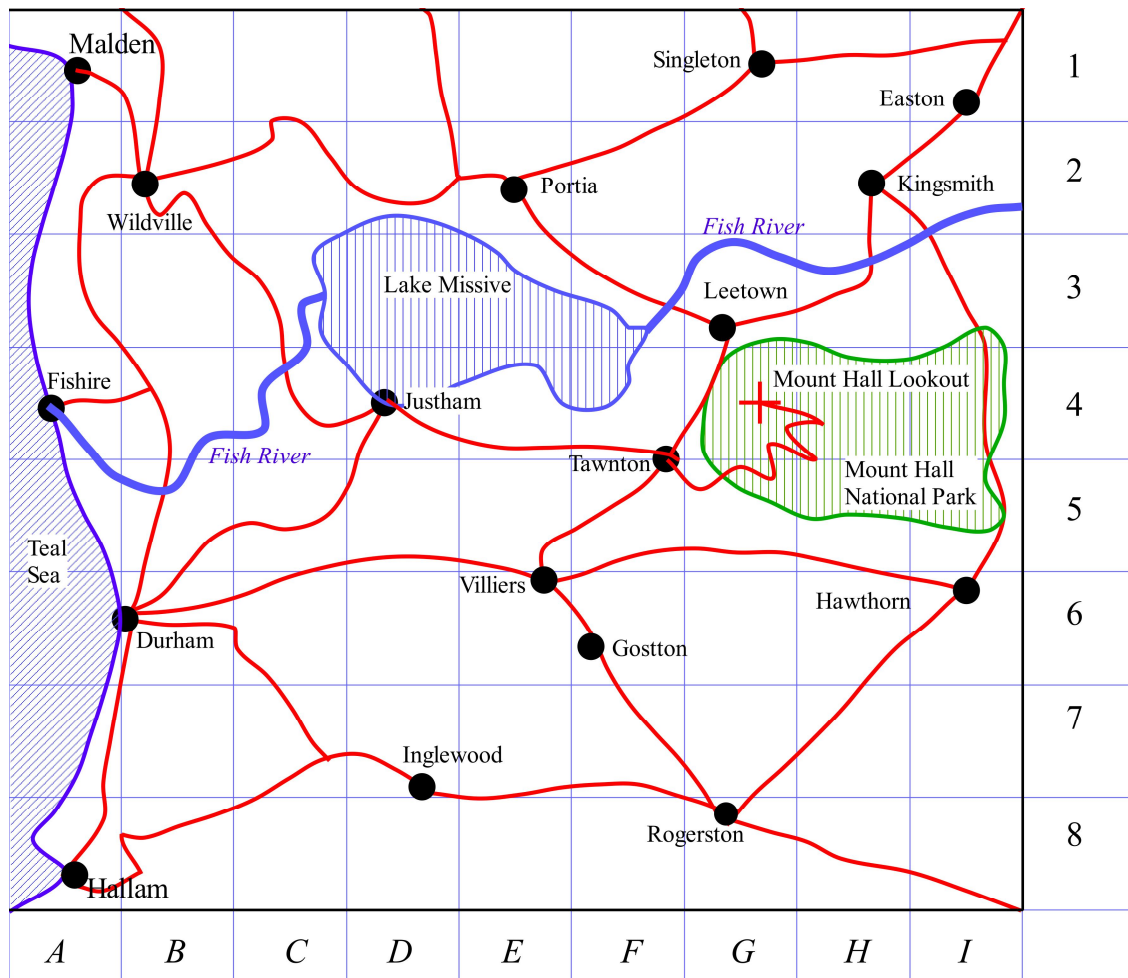
☐ F

☐ H

25. What are the coordinates of point E?

(-3, -2)





Scale 1 cm : 50 km

Questions 26 – 30 refer to the map of the Teal Coast.

26. Give the name of the town which is west of Kingsmith and NW of Hawthorn.

Portia

27. What town is on the coast of the Teal Sea, NW of Justham?

- ☐ Durham.  
☐ Fishire.  
☐ Hallam.  
☒ Malden.

28. Edward swam from Justham, due north across Lake Missive?  
How far did he swim?

125

km.

29. Which two towns are both about 400 km from Tawnton?

Fishire

and

Wildville

30. A plane flies from Malden to Rogerston, taking two hours for the trip.  
What speed and direction does it fly?

It flew in a

SE

direction at a speed of

325

km/h.