




## Exercise 25.1B


1. By first measuring to the nearest millimetre, calculate the actual length of each line with the given scale:


(a)  1 cm : 3 m


(b)  1 cm : 4 m


(c)  1 cm : 4 m

(d)  1 cm : 20 cm


(e)  1 cm : 50 m


(f)  1 cm : 3 km


(g)  1 cm : 10 000 cm


(h)  1 cm : 100 000 cm


2. By first measuring to the nearest millimetre, calculate the actual dimensions of each rectangle with the given scale:

(a)  1 cm : 4 m

(b)  1 cm : 9 m

(c)  1:500

(d)  1 cm : 3.5 m

(e)  1:1000

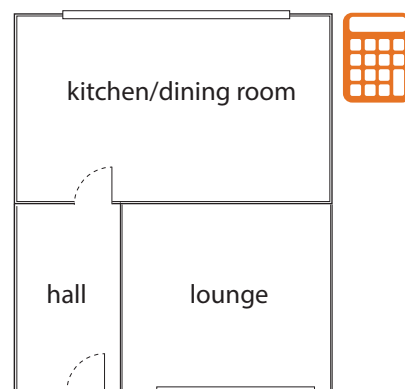
(f)  1:2500

## Exercise 25.1C

For each question, measure to the nearest millimetre:

1. The room plan opposite has a scale of 1 cm : 1.6 m.

- Calculate the length and breadth of the lounge.
- Calculate the length and breadth of the kitchen/dining room.
- Calculate the dimensions of the hall.
- Calculate the width of the kitchen window.



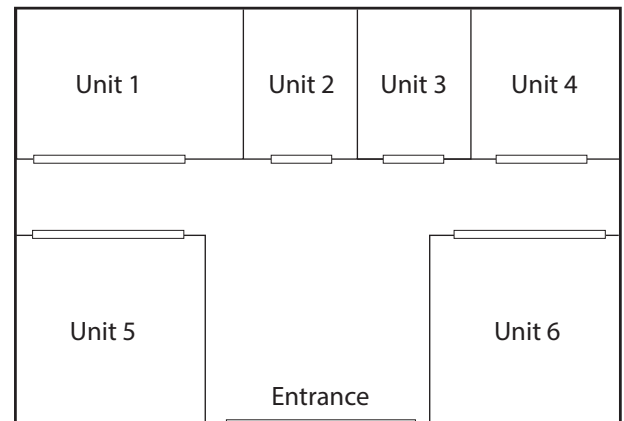
2. The room plan below is for a new house. The plan has a scale of 1 cm : 1.8 m.



- Calculate the length and breadth of the sitting room.
- Calculate the length and breadth of the kitchen/dining room.
- The internal doors are all the same width. Calculate the width of the doors.
- Calculate the width of the garage door.

3. The floor plan opposite is for a local shopping centre. The scale is 1 cm : 12 m.

- Calculate the dimensions of unit 1.
- Calculate the dimensions of unit 4.
- Calculate the area of unit 5.
- Calculate the area of the shopping centre.
- Calculate the percentage of the area of the shopping centre taken up by units 5 and 6.



## Exercise 25.2



- Given the following map distances and actual distances, calculate the scale of each map. Express the scale as a ratio:
 

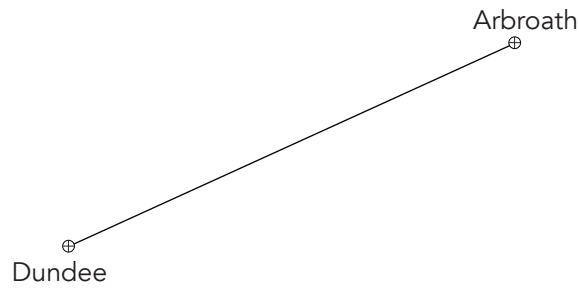
(a) 5 cm and 50 m.	(b) 2 cm and 5 km.	(c) 3 cm and 18 m.
(d) 8 cm and 52 m.	(e) 28 m and 15.4 km.	(f) 34 cm at 782 m.
(g) 4.5 cm and 6525 m.	(h) 39.4 cm and 5.91 km.	(i) 45 mm and 54 m.
(j) 73 mm and 1.46 km.	(k) 62 mm and 4.216 m.	(l) 3.9 cm and 1.365 km.

2. The distance between Kyle of Lochalsh and Dornie is 12 kilometres.



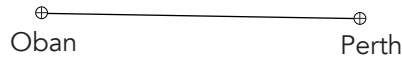
Measure the distance on the scale drawing to calculate the scale.

3. The distance between Dundee and Arbroath is 26 kilometres.



Measure the distance on the scale drawing to calculate the scale.

4. The distance between Perth and Oban is 126 kilometres.



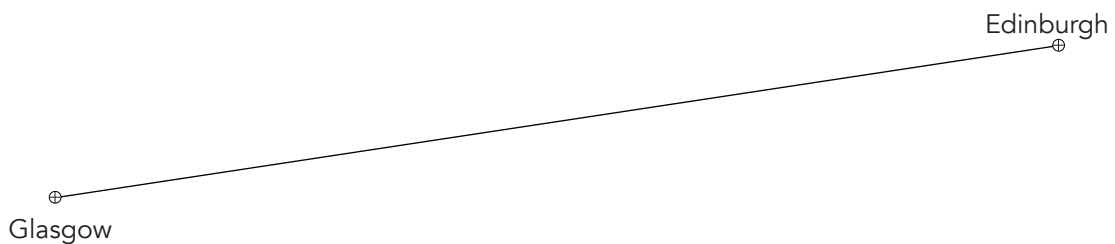
Measure the distance on the scale drawing to calculate the scale.

5. The distance between Invergordon and Elgin is 51 kilometres.



Measure the distance on the scale drawing to calculate the scale.

6. The distance between Glasgow and Edinburgh is 67 kilometres.



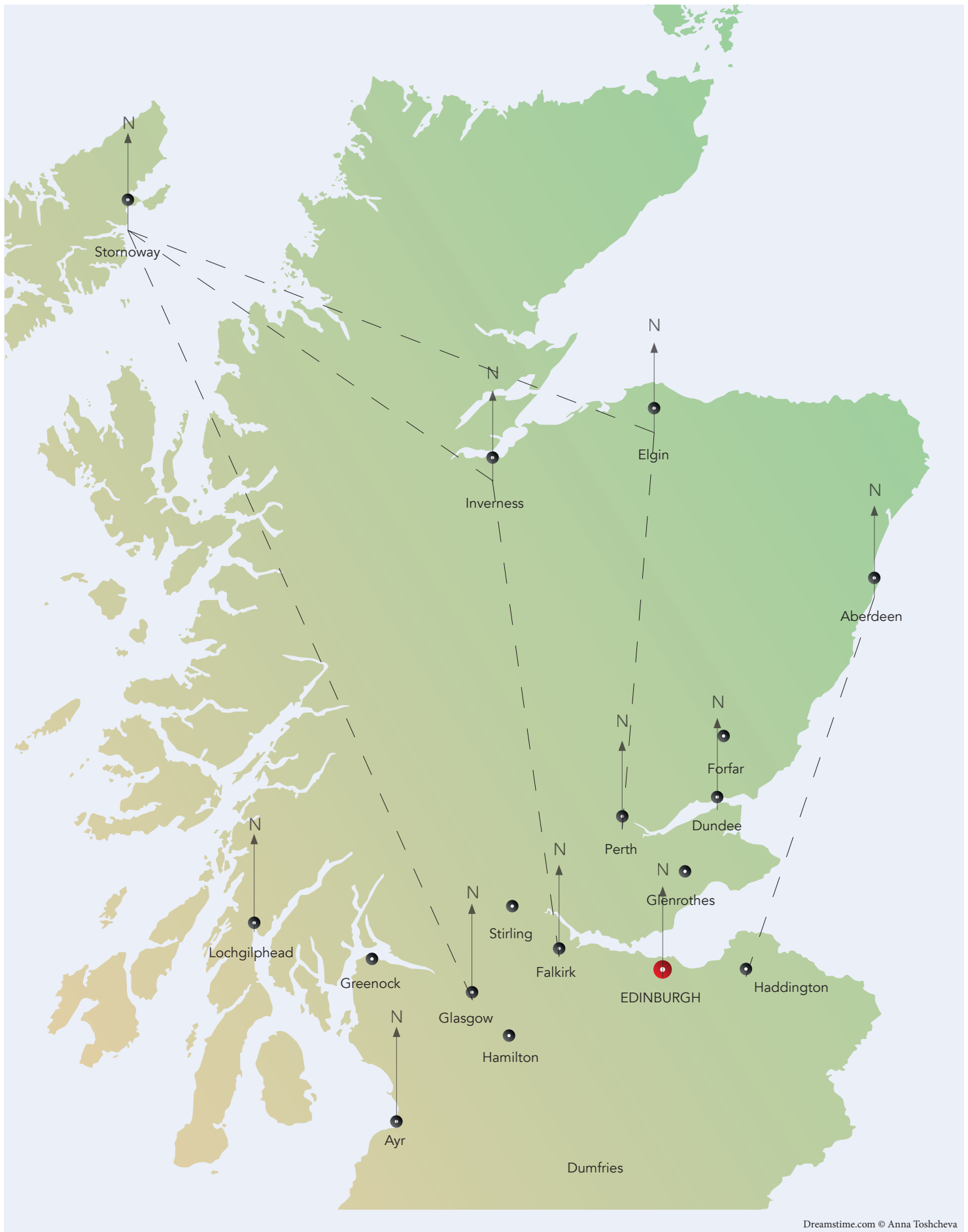
### Exercise 25.3

1. Using the map on the page opposite, measure the bearing from:

- |                               |                            |                          |
|-------------------------------|----------------------------|--------------------------|
| (a) Ayr to Glasgow.           | (b) Glasgow to Falkirk.    | (c) Falkirk to Perth.    |
| (d) Falkirk to Forfar.        | (e) Perth to Elgin.        | (f) Inverness to Elgin.  |
| (g) Stornoway to Inverness.   | (h) Glasgow to Haddington. | (i) Ayr to Edinburgh.    |
| (j) Lochgilphead to Stirling. | (k) Inverness to Forfar.   | (l) Lochgilphead to Ayr. |

2. Using the map on the page opposite, measure the bearing from:

- |                              |                             |                            |
|------------------------------|-----------------------------|----------------------------|
| (a) Ayr to Lochgilphead.     | (b) Glasgow to Stornoway.   | (c) Falkirk to Inverness.  |
| (d) Edinburgh to Stirling.   | (e) Aberdeen to Haddington. | (f) Elgin to Stornoway.    |
| (g) Inverness to Stornoway.  | (h) Dundee to Stirling.     | (i) Edinburgh to Greenock. |
| (j) Glasgow to Lochgilphead. | (k) Aberdeen to Elgin.      | (l) Perth to Ayr.          |



Dreamstime.com © Anna Toshcheva

## Exercise 25.6

25.1 The room plan opposite has a scale of 1 cm : 1.4 m.

- (a) Determine the length and breadth of the lounge.
- (b) Determine the length and breadth of the kitchen/dining room.
- (c) Determine the dimensions of the hall.
- (d) Determine the width of the kitchen window.

