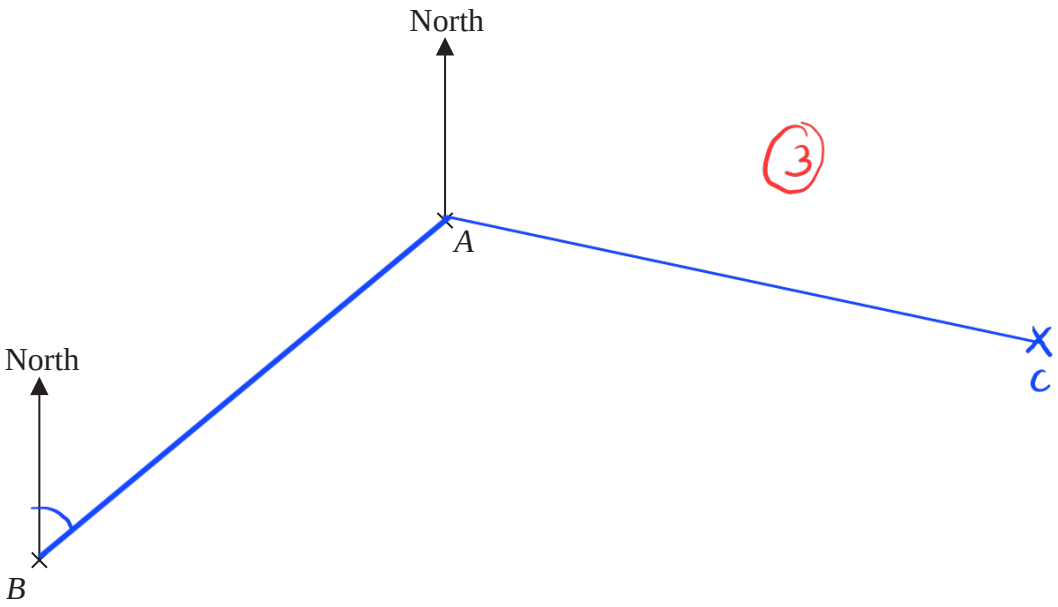
1 The accurate scale drawing shows the positions of two mobile phone masts, *A* and *B*.



The scale is 1 cm to 2.5 km.

(a) Find the bearing of *A* from *B*.

050 (1)

.....°

(1)

(b) Work out the actual distance, in km, between *A* and *B*.

AB = 7cm

actual distance = 7 x 2.5 km (1)

= 17.5 km

17.5 (1)

..... km

(2)

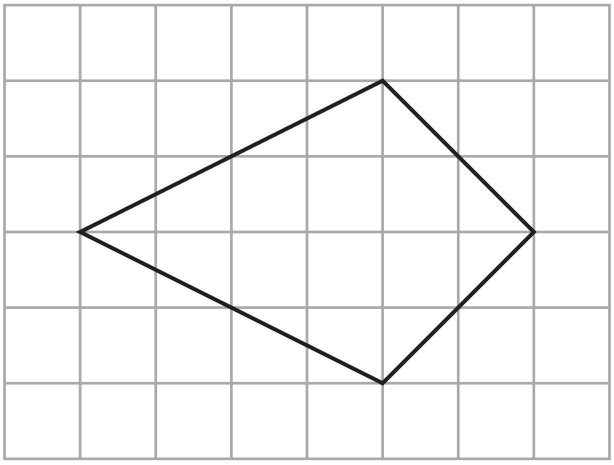
A third mobile phone mast, *C*, is put up.
C will be on a bearing of 115° from *A*.
C will be 20 km from *B*.

(c) Find the position of *C*.
Mark this point with a cross (×) and label it *C*.

(3)

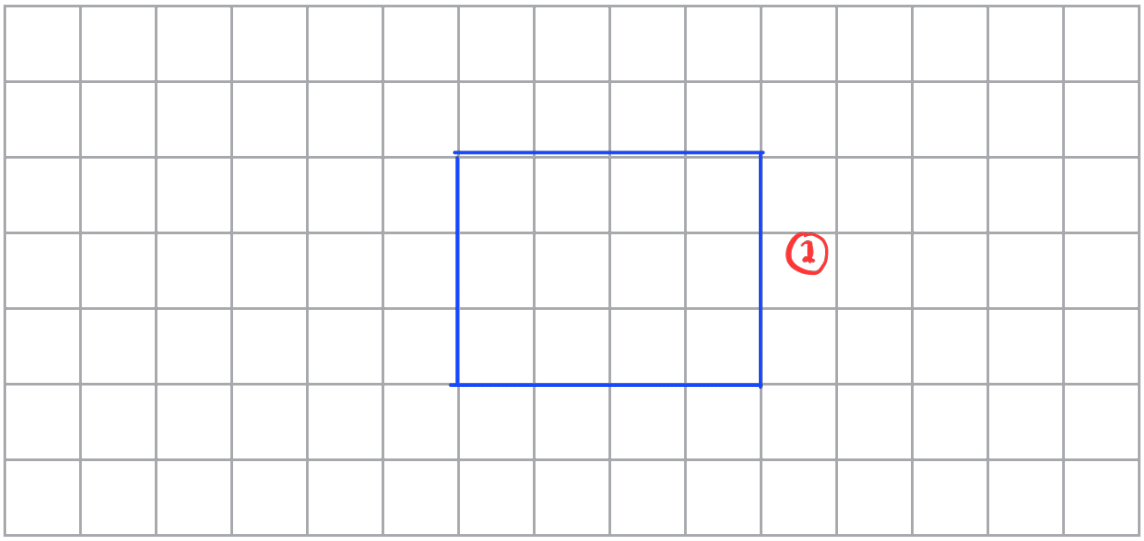
(Total for Question 1 is 6 marks)

2 The diagram shows a kite drawn on a centimetre grid.



Area = 12 (1)

On the centimetre grid below, draw a rectangle that has the same area as the kite.

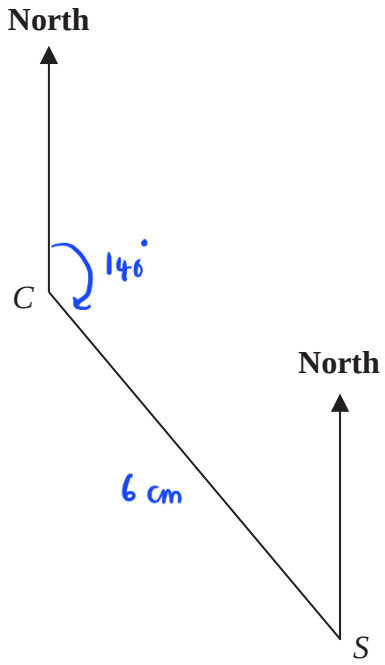


(1)

Area = 12

(Total for Question 2 is 3 marks)

3 The accurate scale drawing shows the position of a college C and a train station S



Scale: 1 cm represents 500 m

For Charles,
1 step = 0.44 m

(b) Work out the number of steps Charles walks as he goes in a straight line from the college to the train station.
Give your answer correct to the nearest whole number of steps.

$6 \text{ cm} \times \frac{500 \text{ m}}{1 \text{ cm}} = 3000 \text{ m}$ (1) (1)

$\frac{3000 \text{ m}}{0.44 \text{ m}} = 6818 \text{ step}$ (1) (1)

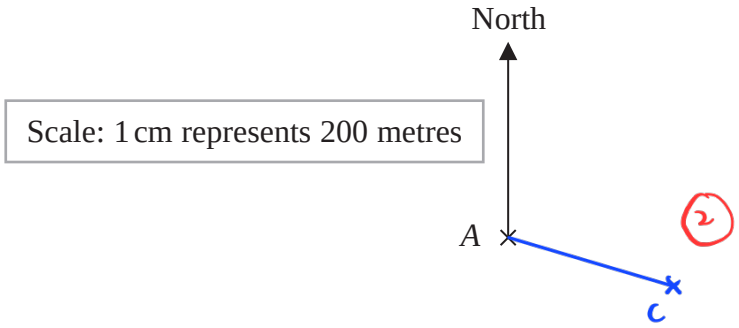
6818

.....

(4)

(Total for Question 3 is 4 marks)

4 The scale diagram shows the position on a map of a house, *A*



House *C* is on a bearing of 110° from *A*
The distance from *A* to *C* is 700 m

(a) Mark the position of *C* on the diagram with a cross (×)
Label your cross *C*

$\frac{700}{200} = 3.5$ cm

1

(3)

(b) Write the scale of the map in the form 1 : *n*

$n = 200 \text{ m} \times \frac{100 \text{ cm}}{1 \text{ m}}$

$= 20\,000$

1 : 20 000

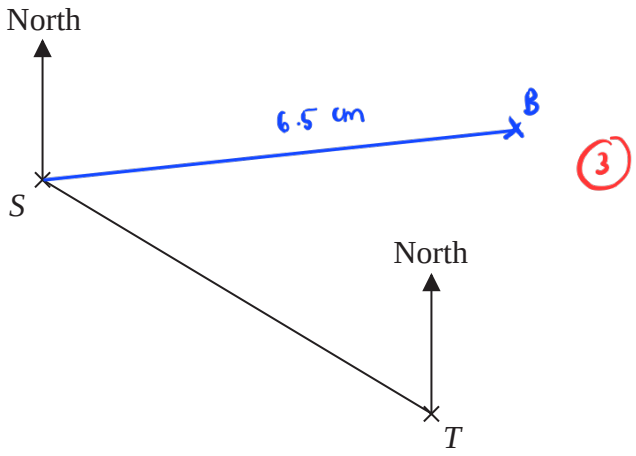
1

1 : 20 000

(1)

(Total for Question 4 is 4 marks)

5 The accurate scale drawing shows the positions of two lighthouses, *S* and *T*



3

The scale of the drawing is 1 cm to 2 km

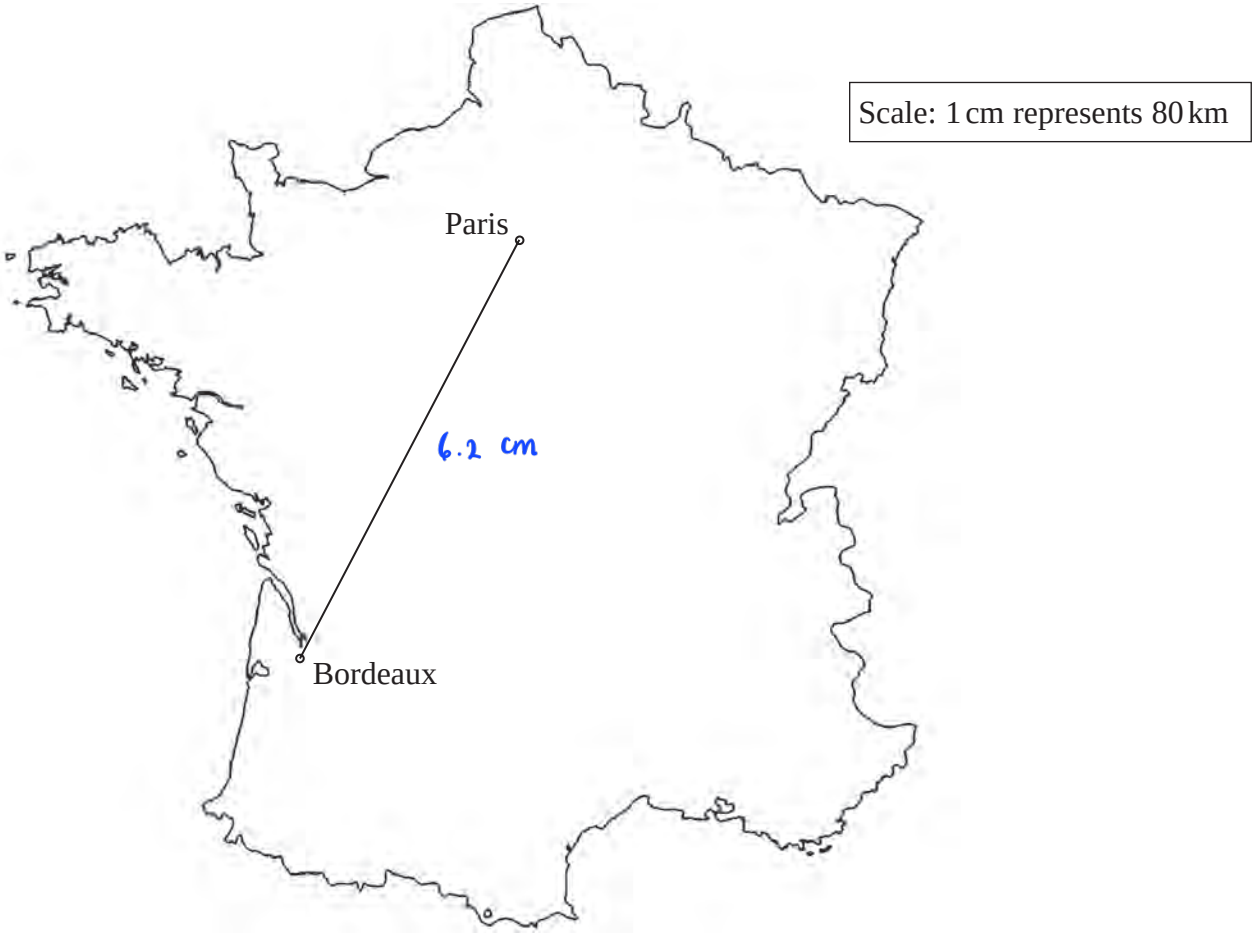
A boat is on a bearing of 084° from *S*
The boat is 13 km from *T*

(b) On the diagram, mark with a cross (×) the position of the boat.
Label the cross *B*

(3)

(Total for Question 5 is 3 marks)

6 Here is a scale drawing showing the positions of Paris and Bordeaux.



Alain drives from Paris to Bordeaux.
The distance that he drives is 590 km.

This distance is greater than the actual straight line distance between Paris and Bordeaux.

How much greater?
Show your working clearly.

6.2 × 80 = 496 (1)

(1)

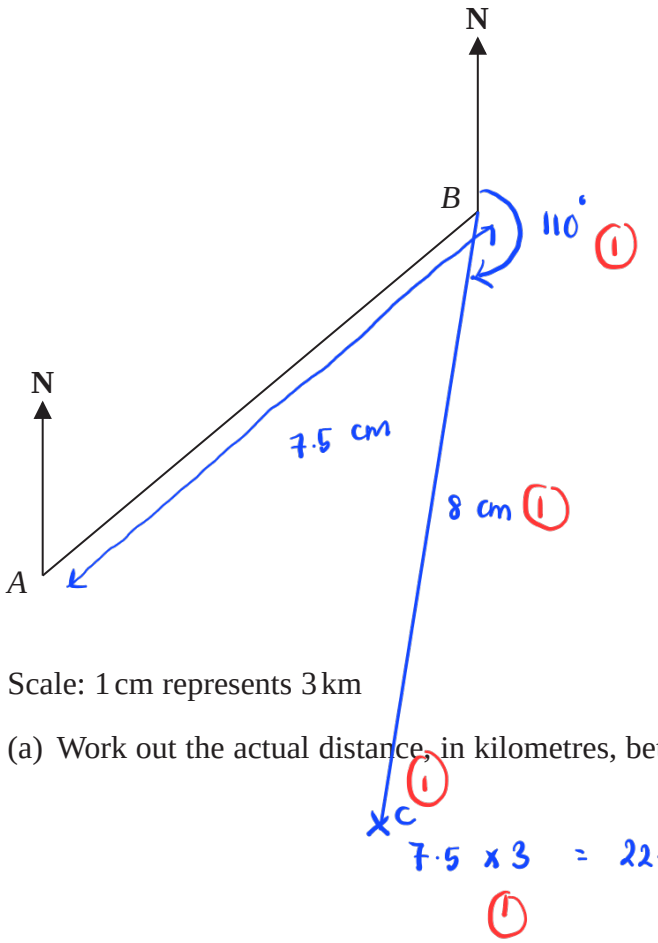
590 − 496 = 94 (1)

(1)

94 ..... km

(Total for Question 6 is 4 marks)

7 The scale drawing shows the positions of two boats, *A* and *B*



Scale: 1 cm represents 3 km

(a) Work out the actual distance, in kilometres, between *A* and *B*

7.5 x 3 = 22.5

22.5 ..... km

(2)

Boat *C* is on a bearing of 110° from *B*
Boat *C* is 24 km from *B*

(b) On the scale drawing, mark with a cross (×) the position of boat *C*

(3)

(Total for Question 7 is 5 marks)

8 Here is a sketch of triangle *ABC*

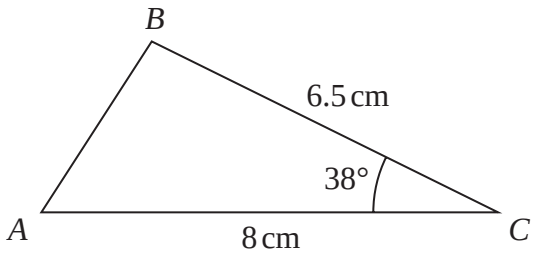
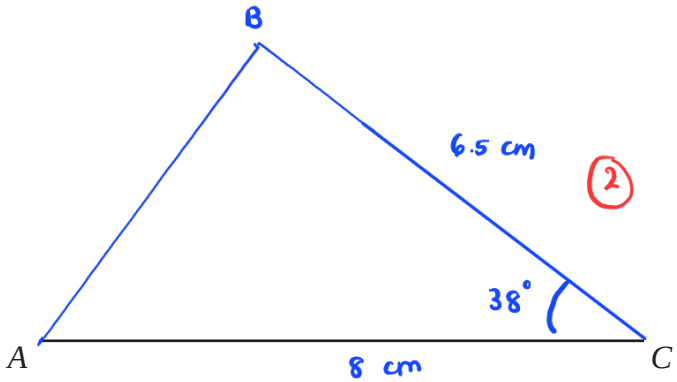


Diagram **NOT** accurately drawn

AC = 8 cm *BC* = 6.5 cm angle *ACB* = 38°

In the space below, make an accurate drawing of triangle *ABC*
The line *AC* has been drawn for you.



(Total for Question 8 is 2 marks)