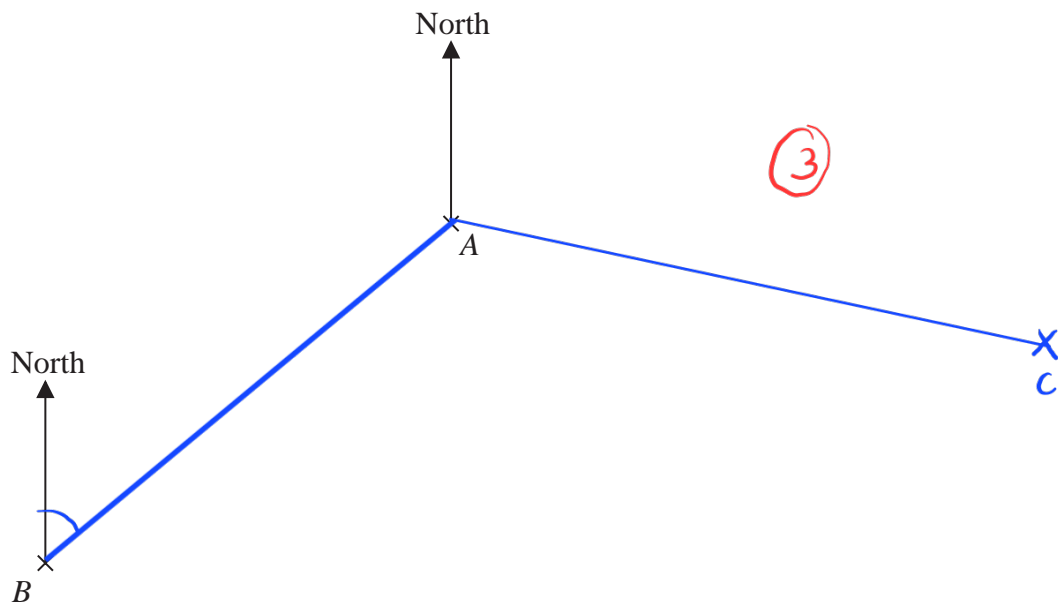**1** The accurate scale drawing shows the positions of two mobile phone masts, *A* and *B*.

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 = 7 cm

actual distance = 7 × 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*.
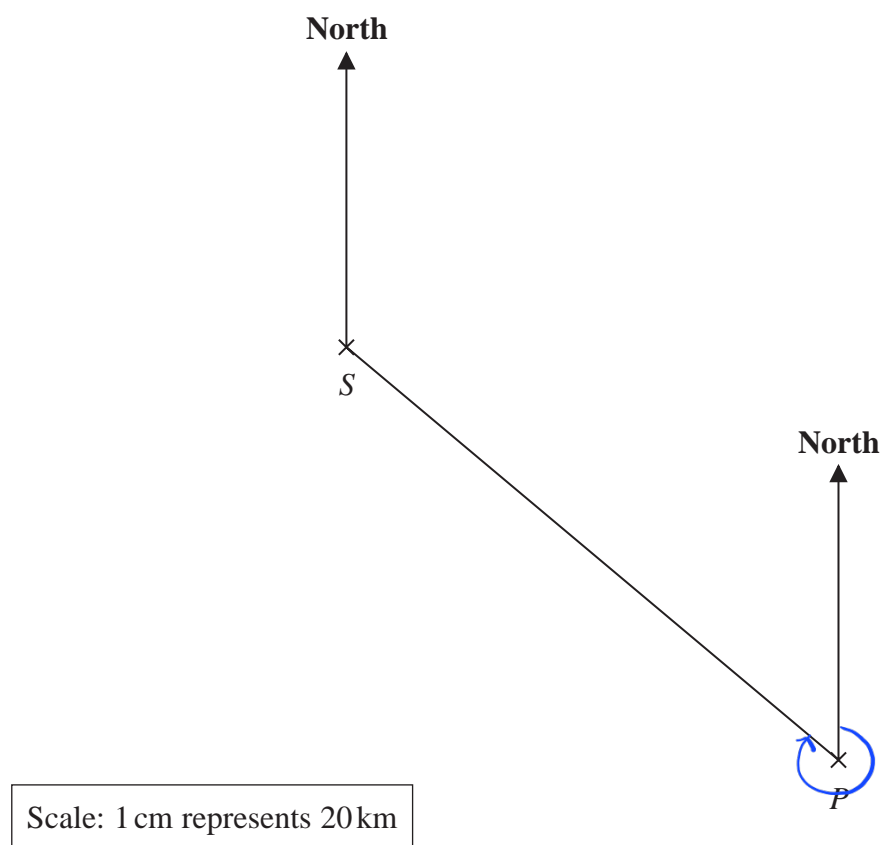*C* will be 20 km from *B*.

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

(3)

(Total for Question 1 is 6 marks)

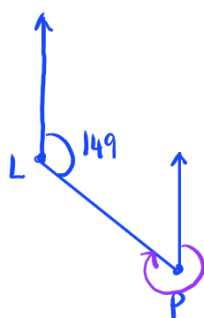**2** The scale drawing shows the positions of a ship, *S*, and a port, *P*.

North

North

Scale: 1 cm represents 20 km

(a) Find the bearing of *S* from *P*.

310 ① °

....

(1)

(Total for Question 2 is 1 marks)

3 The bearing of Paris from London is 149°

Work out the bearing of London from Paris.

$$= 360° - (180° - 149°) \quad ①$$

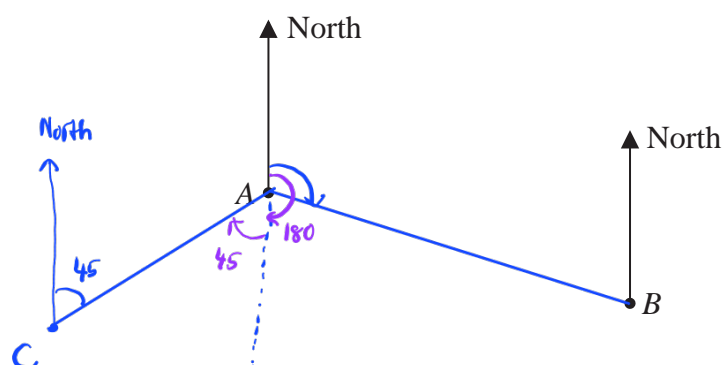$$= 360° - 31°$$

$$= 329° \quad ①$$

329 °
....

(Total for Question 3 is 2 marks)

4 The scale diagram shows the positions of a post office (*A*) and a police station (*B*) in a town.

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

107 °

(1)

The town hall is at a position *C*.
The bearing of *A* from *C* is 045°

(b) Calculate the bearing of *C* from *A*.

$$180° + 45° = 225°$$

225 °

(2)

(Total for Question 4 is 3 marks)

5 The diagram shows the positions of three villages, *R*, *T* and *W*.

North

North
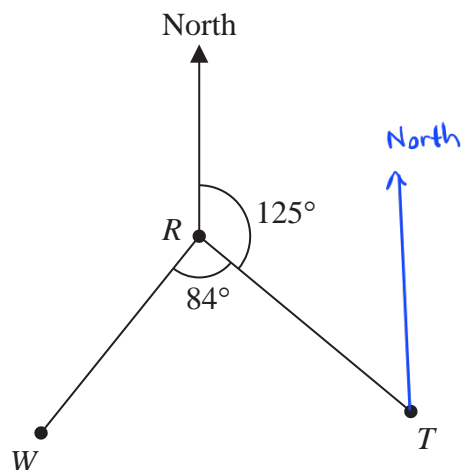
Diagram **NOT** accurately drawn

125°

R

84°

T

W

(a) Work out the bearing of village *W* from village *R*.

$125° + 84° = 209°$

209 °

(1)

(b) Work out the bearing of village *R* from village *T*.

$180° - 125° = 55°$

$360 - 55 = 305$

305 °

(2)

(Total for Question 5 is 3 marks)

6 The accurate scale drawing shows the position of a college *C* and a train station *S*
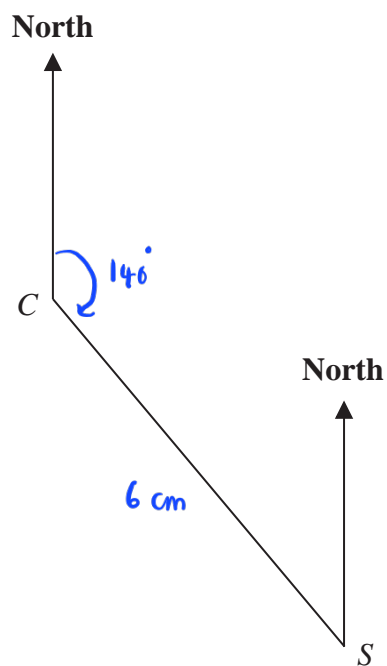
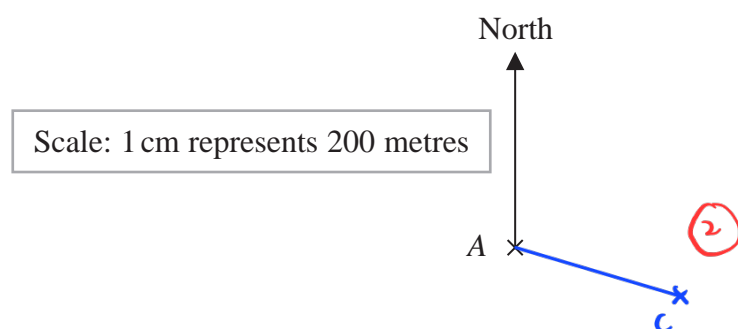Scale: 1 cm represents 500 m

(a) Find the bearing of *S* from *C*

.... °

(1)

(Total for Question 6 is 1 marks)

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

North

Scale: 1 cm represents 200 metres

A ✗

②

✗
C

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*

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

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

1 : 20 000

1 : ......20 000......

(1)

(Total for Question 7 is 4 marks)

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

North

6.5 cm

B

③

S
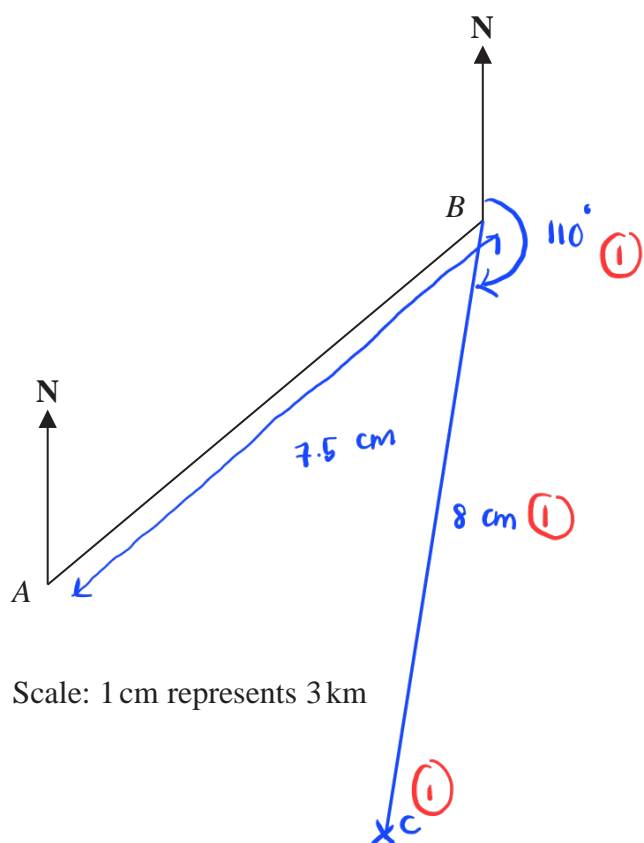
North

T
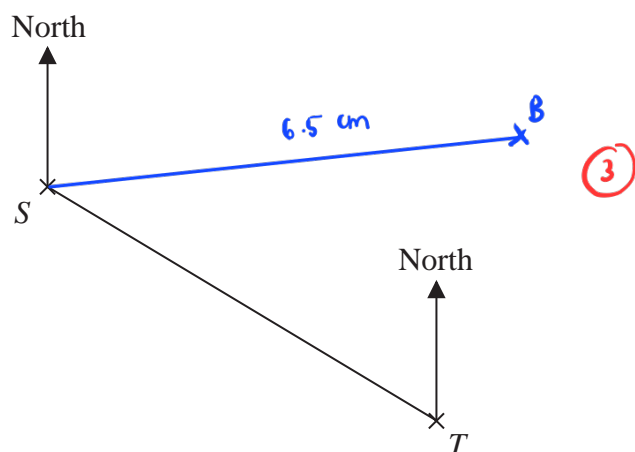
The scale of the drawing is 1 cm to 2 km

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 8 is 3 marks)

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

N

B
110° ①

N

7.5 cm

8 cm ①

A

Scale: 1 cm represents 3 km
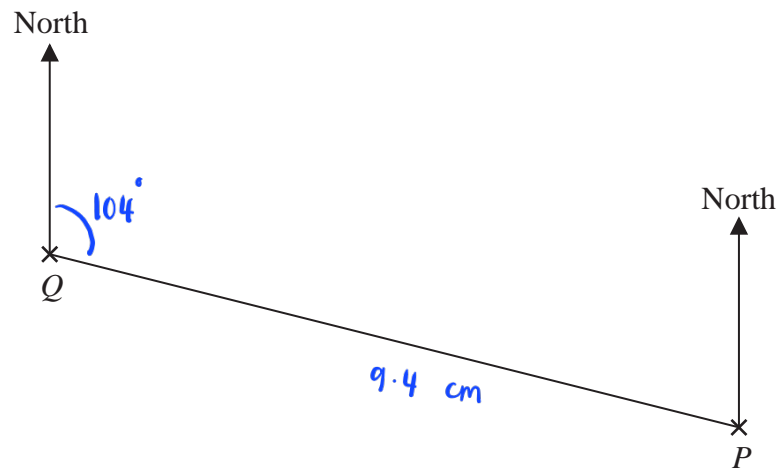
×C ①

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 9 is 3 marks)

10 The scale drawing shows the positions of two airports *P* and *Q*

North

104°

×
Q

9.4 cm

North

×
P

scale: 1 cm represents 50 km

(a) Find, by measuring, the bearing of *P* from *Q*

104 ① °

(1)

A small plane flies directly from *P* to *Q*
The plane takes 2 hours to fly from *P* to *Q*

(b) Work out the average speed of the plane.
Give your answer in km/h

distance = 9.4 × 50 km = 470 km ①

speed = $\frac{470 \text{ km}}{2 \text{ h}}$ ① = 235 km/h ①

235 .... km/h

(3)

(Total for Question 10 is 4 marks)