

# Topic Test 1 (20 minutes)

## Scale diagrams and bearings - Higher

- 1 A plane flies on a bearing of  $056^\circ$   
It turns clockwise to fly due South.

Circle the angle through which the plane must turn.

**[1 mark]**

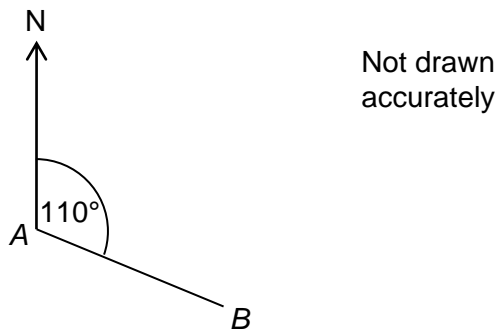
$124^\circ$

$146^\circ$

$236^\circ$

$304^\circ$

- 2 The bearing of  $B$  from  $A$  is  $110^\circ$



Circle the bearing of  $A$  from  $B$ .

**[1 mark]**

$070^\circ$

$200^\circ$

$250^\circ$

$290^\circ$

- 3 1 inch = 2.54 cm  
1 mile = 1.6 km

A map has a scale of 1 inch represents 1 mile

Use the given conversions to show that 1 cm on the map represents approximately 0.6 km

**[2 marks]**

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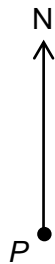
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4 The diagram shows the position of a ship ( $P$ ).



4 (a) A lighthouse ( $L$ ) is 45 km from  $P$  on a bearing of  $060^\circ$

Draw a scale diagram to show the position of  $L$ .

Use a scale of 1 cm represents 5 km

[2 marks]

4 (b) Write down the bearing of  $P$  from  $L$ .

[1 mark]

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Answer \_\_\_\_\_<sup>o</sup>

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**4 (c)** The ship sails on a bearing of  $120^\circ$  from its original position until it is at  $T$ , due South of  $L$ .

How far is  $T$  from  $L$ ?

You may use a sketch.

You **must not** use a scale diagram.

**[3 marks]**

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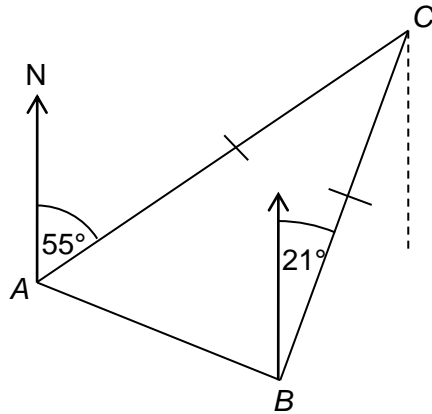
Answer \_\_\_\_\_ km

5 The diagram shows the positions of three villages  $A$ ,  $B$  and  $C$ .

The bearing of  $C$  from

- $A$  is  $055^\circ$
- $B$  is  $021^\circ$

$$AC = BC$$



Not drawn accurately

Work out the bearing of  $B$  from  $A$ .

You **must** show your working which may be on the diagram.

[4 marks]

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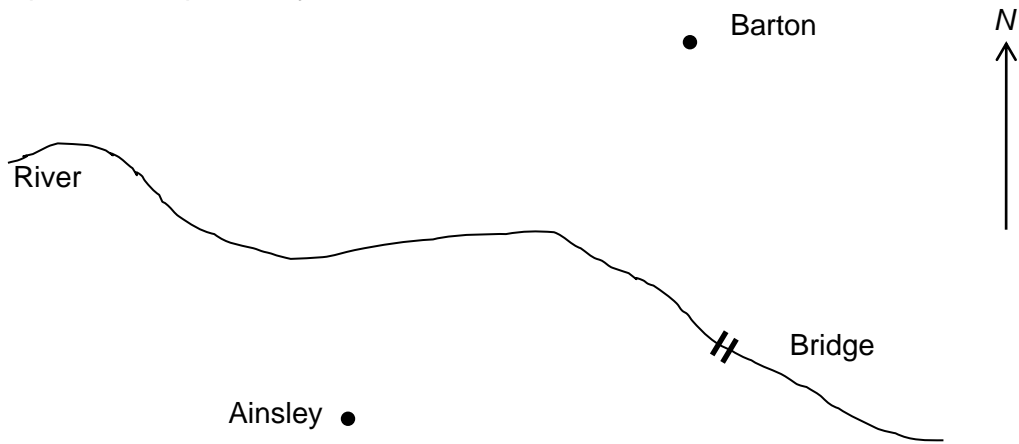
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Answer \_\_\_\_\_<sup>o</sup>

6 Here is part of a map used by walkers.



**Scale** 1 : 150 000

To walk from Ainsley to Barton involves a climb of 600 metres.

6 (a) George usually walks 6 km each hour.

Estimate the time it takes him to walk from Ainsley to Barton.  
He crosses the river using the bridge.

Assume

- he walks in a straight line from Ainsley to the bridge and from the bridge to Barton
- he takes 1 minute longer for every 10 metres he climbs.

**[4 marks]**

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Answer \_\_\_\_\_ hours

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**6 (b)** Comment on how each assumption affects the accuracy of your estimate.

**[2 marks]**

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