

QT - Bearings



1. The diagram shows the position of two ships, A and B.

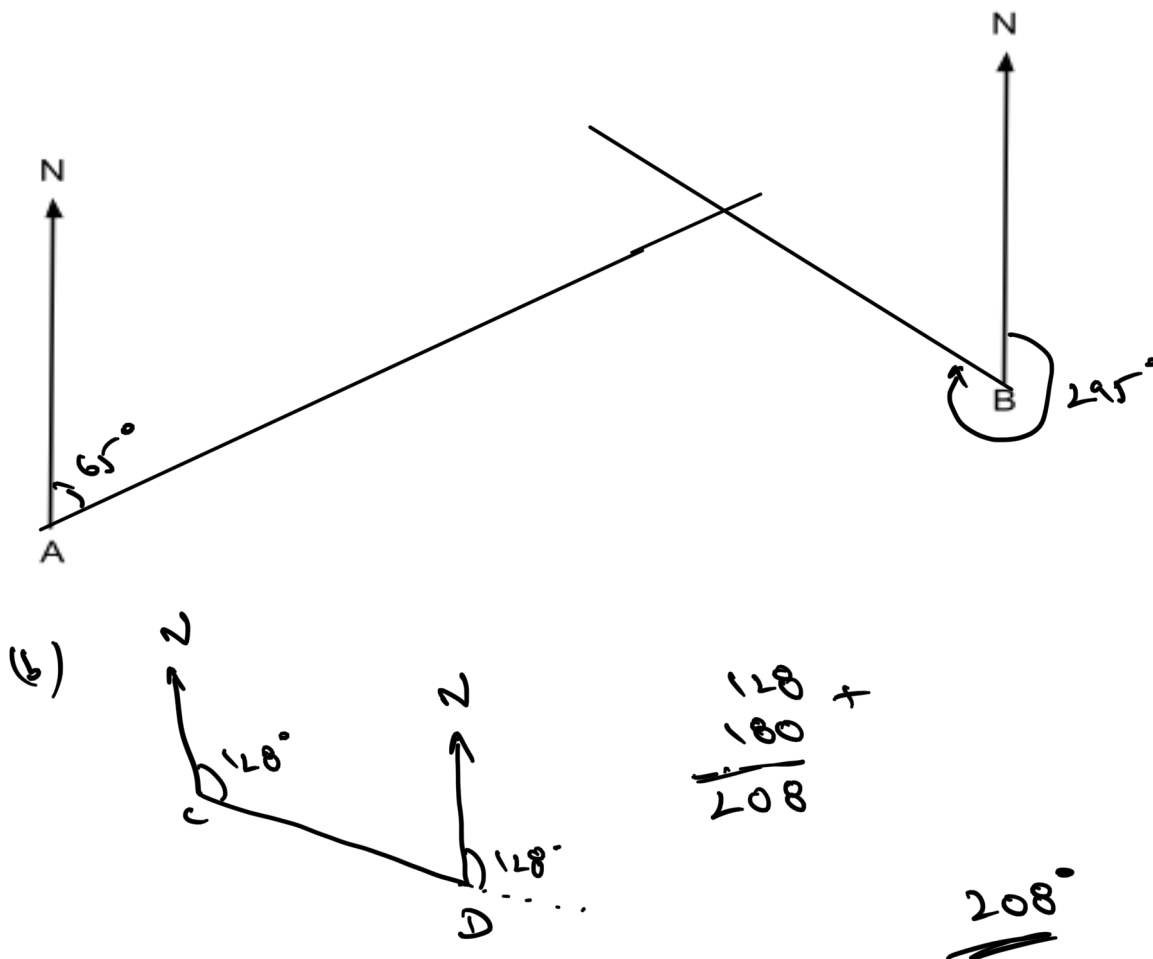
A ship C is on a bearing of 065° from ship A.

Ship C is also on a bearing of 295° from ship B.

(a) Draw an accurate diagram to show the position of ship C. Mark the position of ship C with a cross X. Label it C.

Another ship D is on a bearing of 128° from ship C.

(b) Work out the bearing of ship C from ship D.



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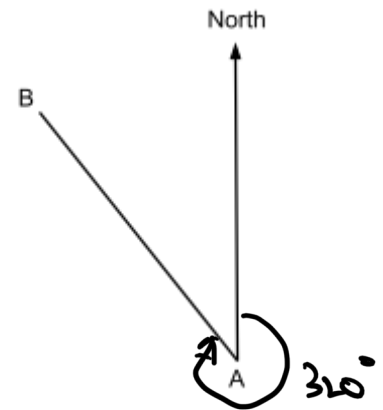


2. Measure and write down the bearing of B from A

Bearing of B from A

$$\begin{array}{r} 360 - \\ \underline{40} \\ 320 \end{array}$$

$$= \underline{\underline{320^\circ}}$$



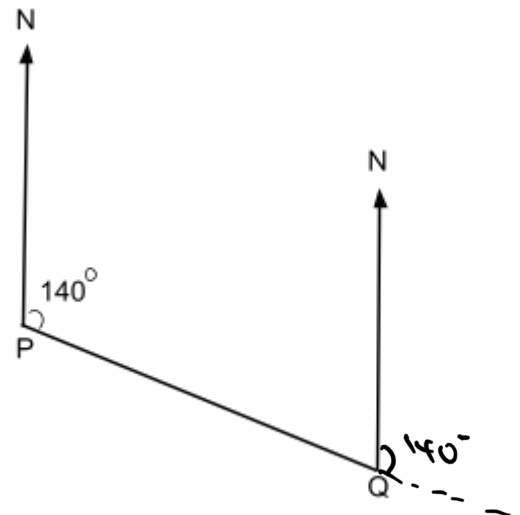
3. The bearing of Q from P is 140° .
What is the bearing of P from Q?

The drawing is not to scale.

Bearing of P from Q

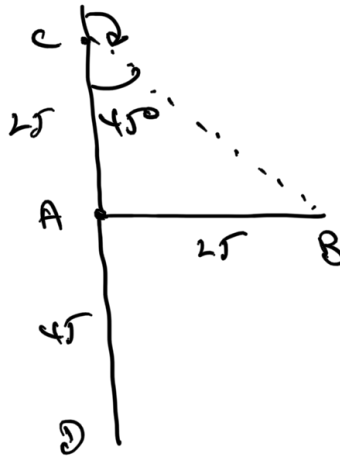
$$= 140 + \begin{array}{r} 180 \\ \underline{180} \\ 220 \end{array}$$

$$= \underline{\underline{220^\circ}}$$

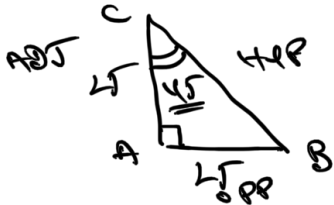


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4. A, B, C and D are four towns.
 B is 25 kilometres due East of A.
 C is 25 kilometres due North of A.
 D is 45 kilometres due South of A.
 Calculate the bearing of B from C.



(4 marks)



SOUTH EAST TO A

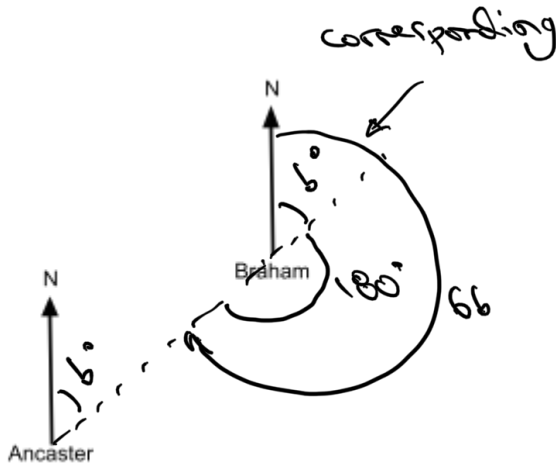
$$T_{CB} = \frac{25}{25} = \frac{1}{1} = 45^\circ$$

$$T_{CA} = \left(\frac{25}{25}\right) = 45^\circ$$

$$180 - 45^\circ = 135^\circ$$

5. The diagram shows the positions of two towns, Ancaster and Braham.
 The bearing of Braham from Ancaster is b°
 The bearing of Ancaster from Braham is $6b^\circ$
 Calculate the 3 digit bearing of Ancaster from Braham.

(4 marks)



$$180^\circ = 5b$$

$$36^\circ = b$$

$$\therefore \text{Bearing} = 6b$$

$$= 6 \times 36$$

$$= 216^\circ$$

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6. A and B are ships. P is a port.

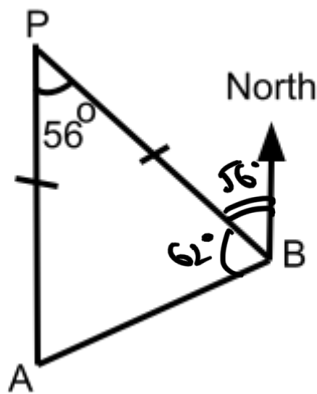
A is due South of P.

Angle APB = 56°

AP = BP

Work out the bearing of A from B.

(3 marks)

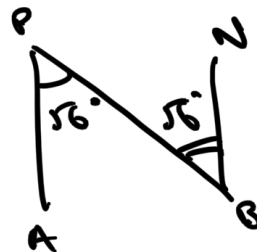


Isosceles



$$180 - 56 = 124$$

$$\frac{124}{2} = 62^\circ$$



Alternate

Bearing of A from B

$$360 - 56 - 62$$

$$= \underline{\underline{242^\circ}}$$

7. The accurate scale drawing shows the positions of port P and a lighthouse L.

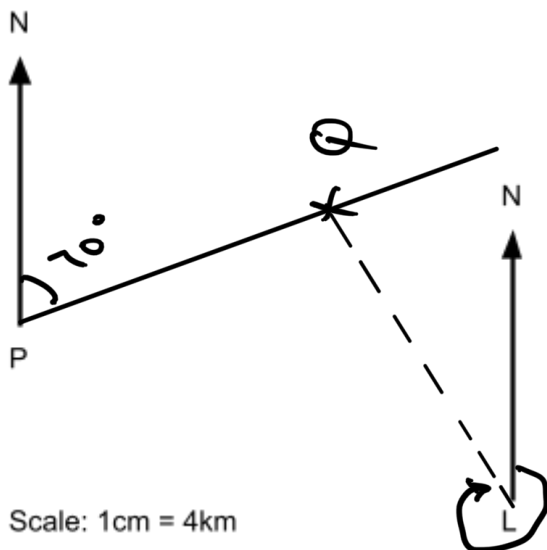
Aleena sails her boat from port P on a bearing of 070°

She sails for $1\frac{1}{2}$ hours at an average speed of 12 km/h to a port Q. Find

(i) the distance, in km, of port Q from lighthouse L,

(ii) the bearing of port Q from lighthouse L.

(4 marks)



Scale: 1cm = 4km

$$12 \text{ km/h} = 18 \text{ km in } 1\frac{1}{2} \text{ hours}$$

$$\frac{18}{4} = 4.5 \text{ cm on drawing}$$

(i) Distance Q to L
 $= 4.5 \text{ cm} = \underline{\underline{18 \text{ km}}}$

(ii) Bearing of Q from L
 $= 360 - 53 = \underline{\underline{307^\circ}}$