# QT - Bearings

1. The diagram shows the position of two ships, A and B.
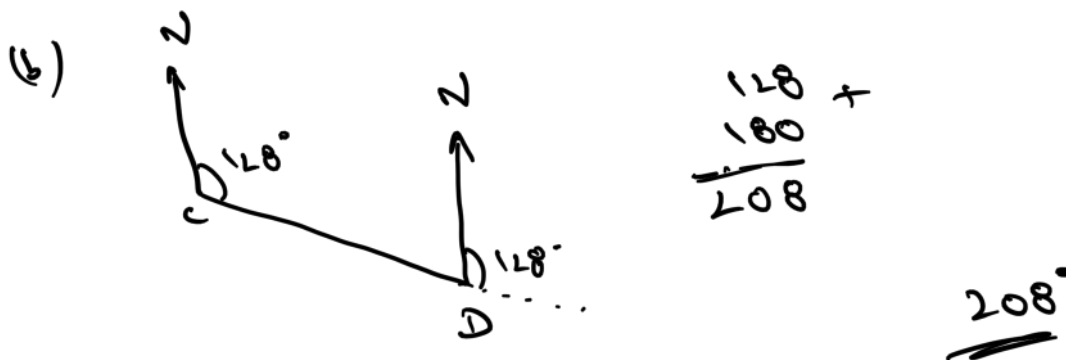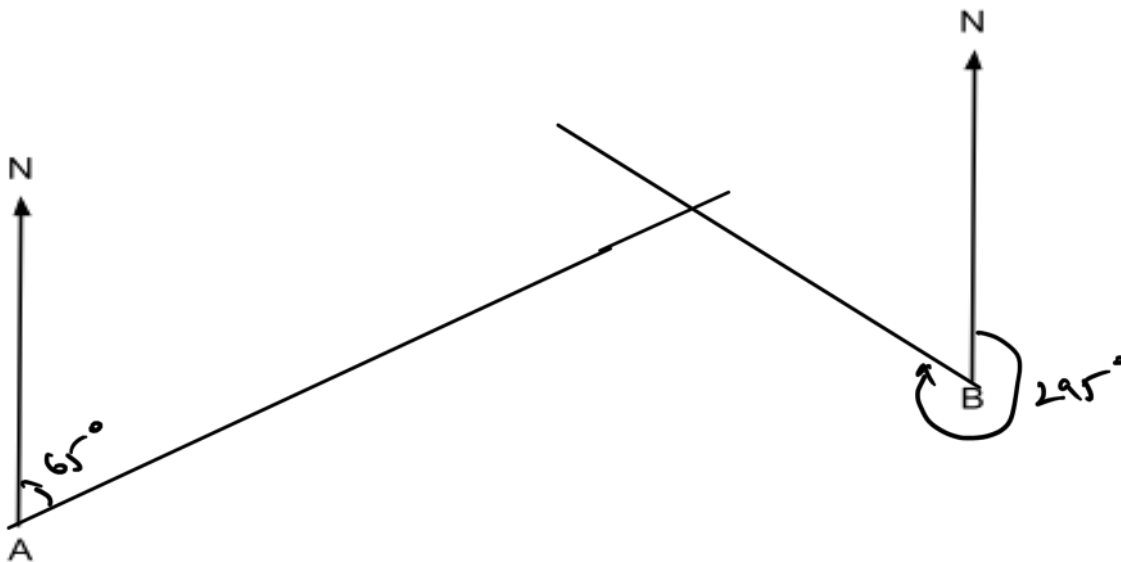A ship C is on a bearing of 065⁰ from ship A.
Ship C is also on a bearing of 295⁰ from ship B.

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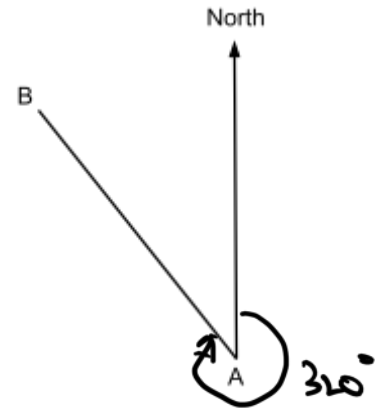
(b) Work out the bearing of ship C from ship D.

N

N

65°

A

B     295°

(b)

N

N

128°

C

128°

D

128° +
180
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208

208°

# QT - Bearings

North

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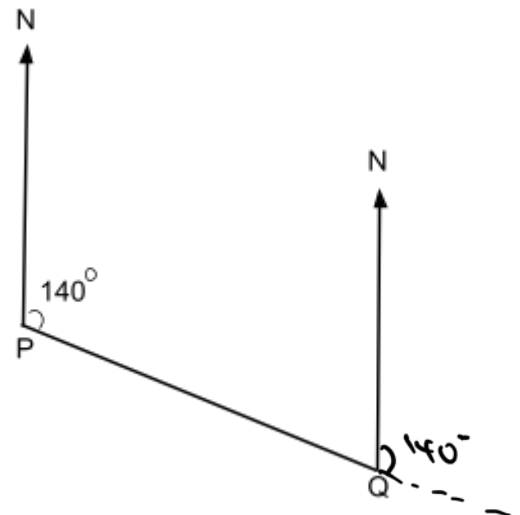
Bearing of B from A

360 −
40
320

= 320°

B

A  320°

3. The bearing of Q from P is 140⁰.
What is the bearing of P from Q?
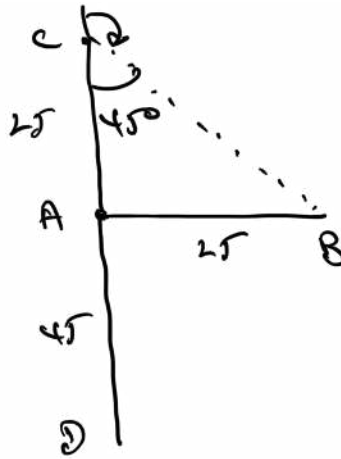
The drawing is not to scale.

Bearing of P from Q

= 140 +
180
220

= 220°

N

140°
P

N

Q  140°

# QT - Bearings

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)

C

25    45°

A ————— 25 ————— B

45

D

C
ADJ    25    HYP
A    45
SOH CAH TOA

$Tan = \frac{OPP}{ADJ} = \frac{25}{25}$

$Tan^{-1} \left( \frac{25}{25} \right) = 45°$

$180 - 45°$
$= 135°$

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°
Calculate the 3 digit bearing of Ancaster from Braham. (4 marks)

corresponding

N

Braham    180°    6b

N

Ancaster
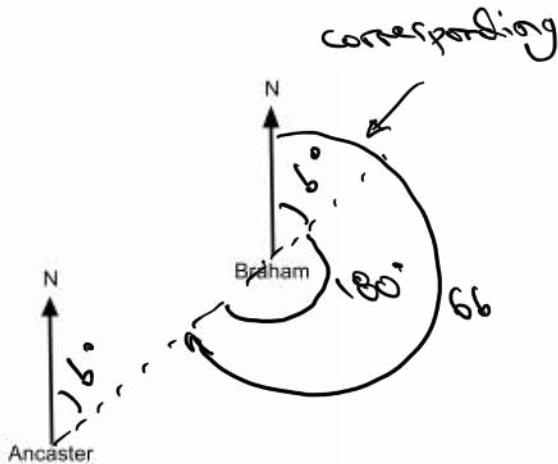
$180° = 5b$

$36° = b$

$\therefore Bearing = 6b$
$= 6 \times 36$
$= 216°$

# QT - Bearings

6. A and B are ships. P is a port.
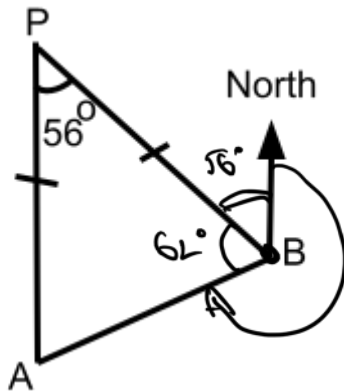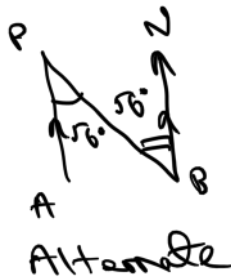A is due South of P.
Angle APB = 56°
AP = BP
Work out the bearing of A from B. (3 marks)



Isosceles

180 − 56 = 124

$\frac{124}{2}$ = 62°

Bearing A from B

360 − 56 − 62

= 242°

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 ½ 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)