

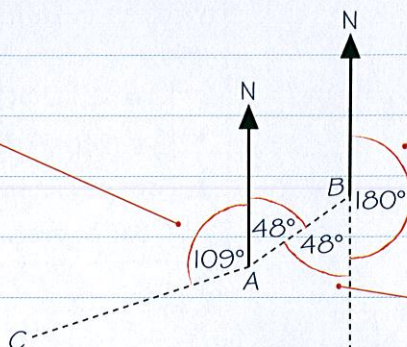
Bearings

Bearings are measured **CLOCKWISE** from **NORTH**.

Bearings always have 3 FIGURES. You might need to add zeros if the angle is less than 100° . In this diagram the bearing of B from A is 048° .

You can measure a bearing bigger than 180° by measuring this angle and subtracting it from 360° .

The bearing of C from A is $360^\circ - 109^\circ = 251^\circ$



You can work out a reverse bearing by adding or subtracting 180° .

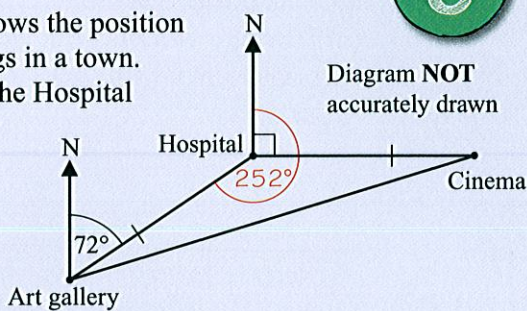
The bearing of A from B is $180^\circ + 48^\circ = 228^\circ$

These are alternate angles.

Worked example

grade C

The diagram shows the position of three buildings in a town. The bearing of the Hospital from the Art gallery is 072° . Work out the bearing of the Cinema from the Art gallery.



$$72^\circ + 180^\circ = 252^\circ$$

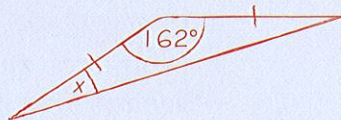
$$162 + 2x = 180$$

$$2x = 18$$

$$x = 9$$

$$72 + 9 = 81$$

The bearing of the Cinema from the Art gallery is 081° .



1. Find the bearing of the Art gallery from the Hospital by adding 180° . Show this angle on the diagram.
2. Sketch the isosceles triangle. The size of the large angle is $252^\circ - 90^\circ = 162^\circ$. Work out the size of each base angle.
3. Add one of the base angles to 72° to find the bearing of the Cinema from the Art gallery. Remember to use three figures in your bearing.

You need to measure each bearing with a **protractor** and draw with a **ruler** and a **sharp pencil**.

Now try this

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

A ship C is on a bearing of 064° from ship A.

Ship C is also on a bearing of 290° 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. (3 marks)

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

- (b) Work out the bearing of ship E from ship D. (2 marks)

edexcel

grade D