

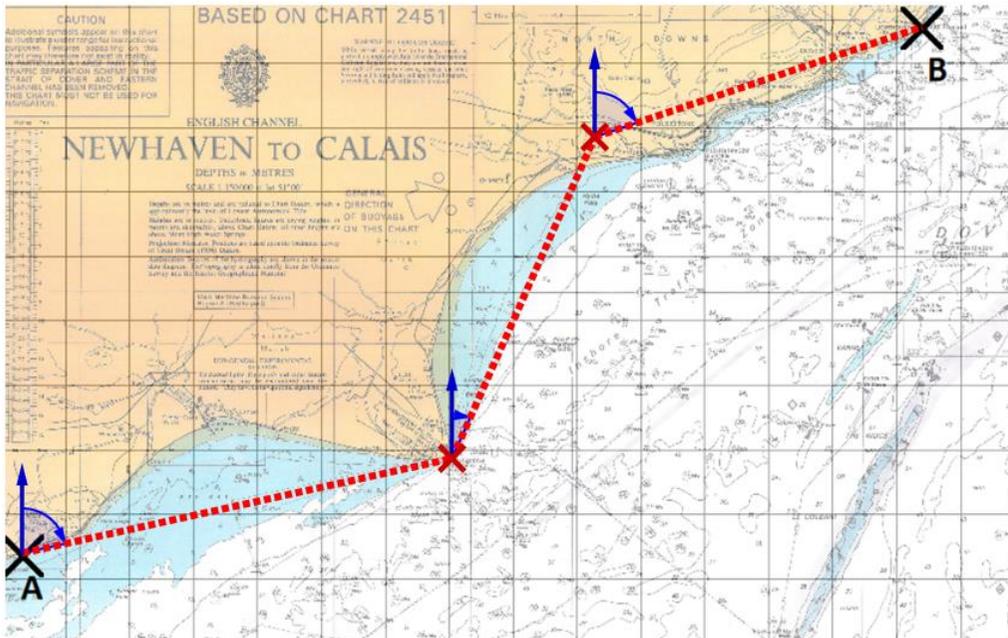
Bearings Course Plotter

Key facts:

- A bearing is measured **clockwise, from North** and is written with **three-figures** (eg: 015° or 228.5°).

The task:

- Plot a route on the map for an aeroplane to follow, staying as close to the coastline as possible, with exactly **three** legs of the journey (that is, **two** changes of direction):



Begin at the point marked A, and finish at B.

- For each leg, give the **distance (km)** and the **bearing**.
For example:

Leg	Distance	Bearing
Leg 1	267km	078°
Leg 2	210.5km	024°
Leg 3	209km	072°

Plot your course using the table below:

Leg	Distance (scale: 1cm: 25km)	Bearing (clockwise, from North)
Leg 1:		
Leg 2:		
Leg 3:		

Once you're done, enter your values into the spreadsheet to test the accuracy of your directions:

Following these directions takes me to within km of B.

(the distance between A and B is around 650km, so if you are off by only 20km or so, your measurements are pretty good!)

Spreadsheet can be found at:

http://www.thechalkface.net/resources/Bearings_Vectors_Conversion.xls

Extension task

A plane is sighted at 06:00, on a bearing of 090° from A , and a bearing of 180° from B .
At 06:20 the bearing from A is 086° , and the bearing from B is 200° .

By marking these two positions on the chart, use the scale ($1\text{cm}: 25\text{km}$) to calculate the approximate speed of the plane, and predict **when** and **where** it will first be over land.

Predict **when** the plane will be **due north of A**, assuming it remains on the same course.
Calculate the **bearing from B** that you would expect at this time.

Solutions

Travelling at around 375 kmph . Should make land at around 06:53.

Will be due north of A at around 07:40, on a bearing of 108° from B .