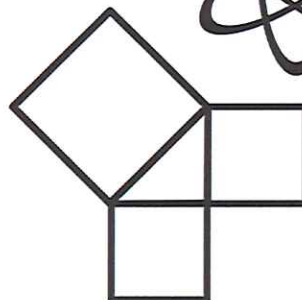
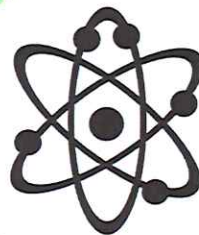
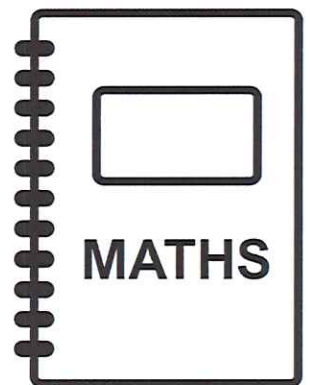


MATHSDIY

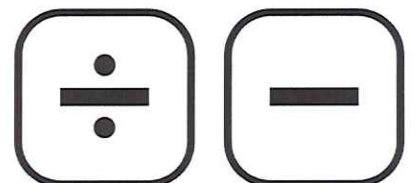
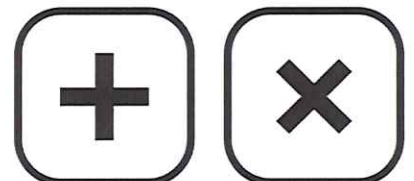
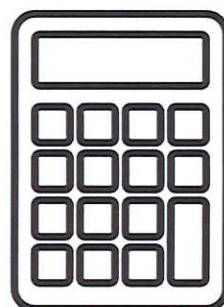
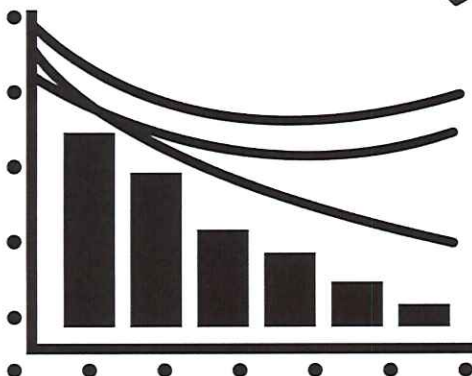
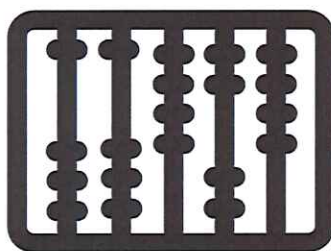
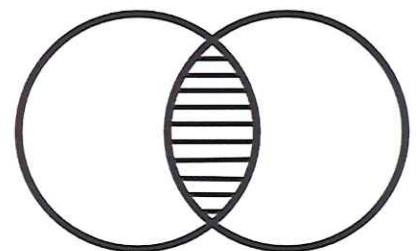
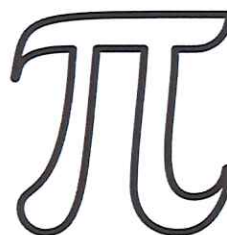
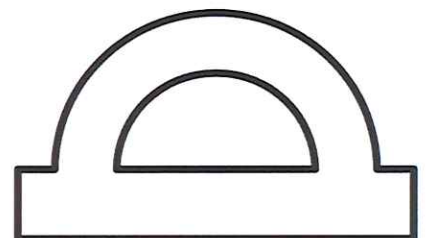
SOLUTIONS

GCSE TOPIC BOOKLET BEARINGS

- always go from North
- always contain three figures
- always go clockwise

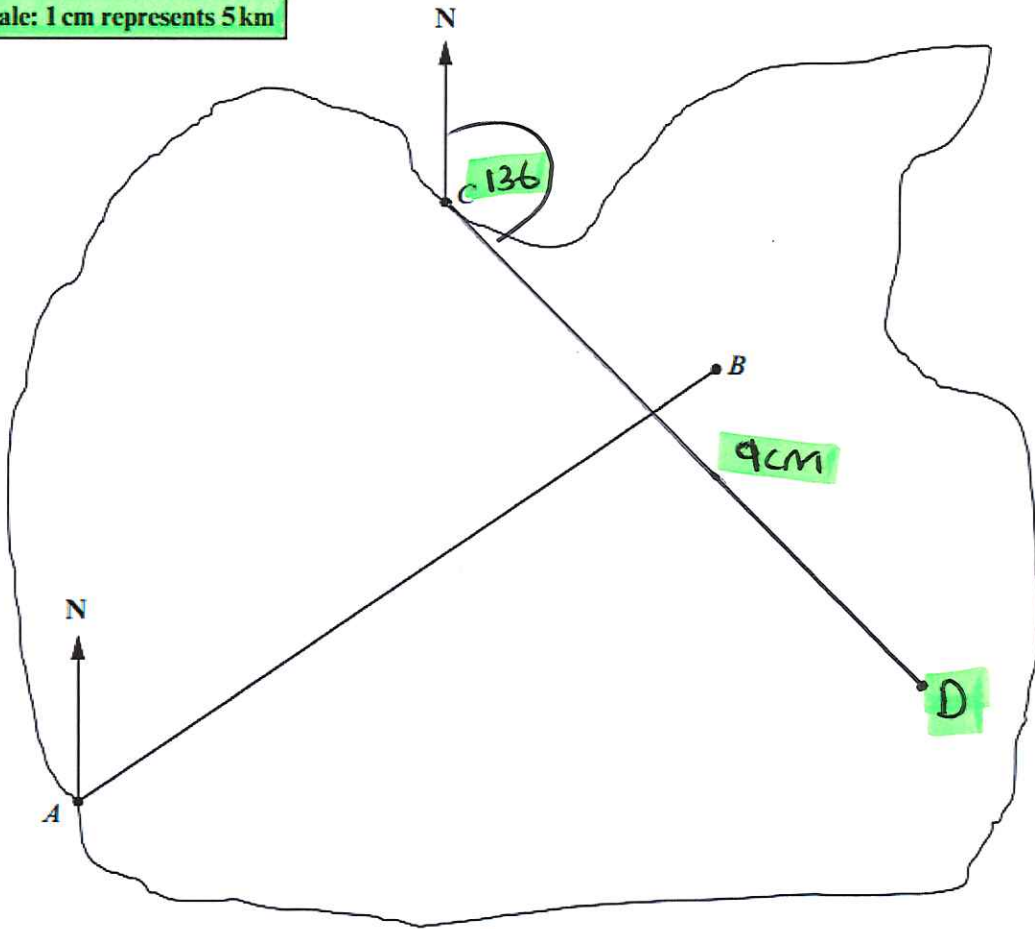


$$a^2 = b^2 + c^2$$



1.

Scale: 1 cm represents 5 km



- (a) The diagram represents a map drawn to a scale of 1 cm to represent 5 km. Measure the length of AB and calculate the distance AB in kilometres.

$AB = \underline{10.1}$ cm (allow $\pm 1\text{mm}$)

$\underline{10.1 \times 5}$

$AB = \underline{50.5}$ km
 (50 km - 51 km) [3]

- (b) The point D is at a distance of 45 km from the point C on a bearing of 136° . Plot the point D on the above map.

$\underline{45\text{km} \div 5 = 9\text{cm on the map}}$

[2]

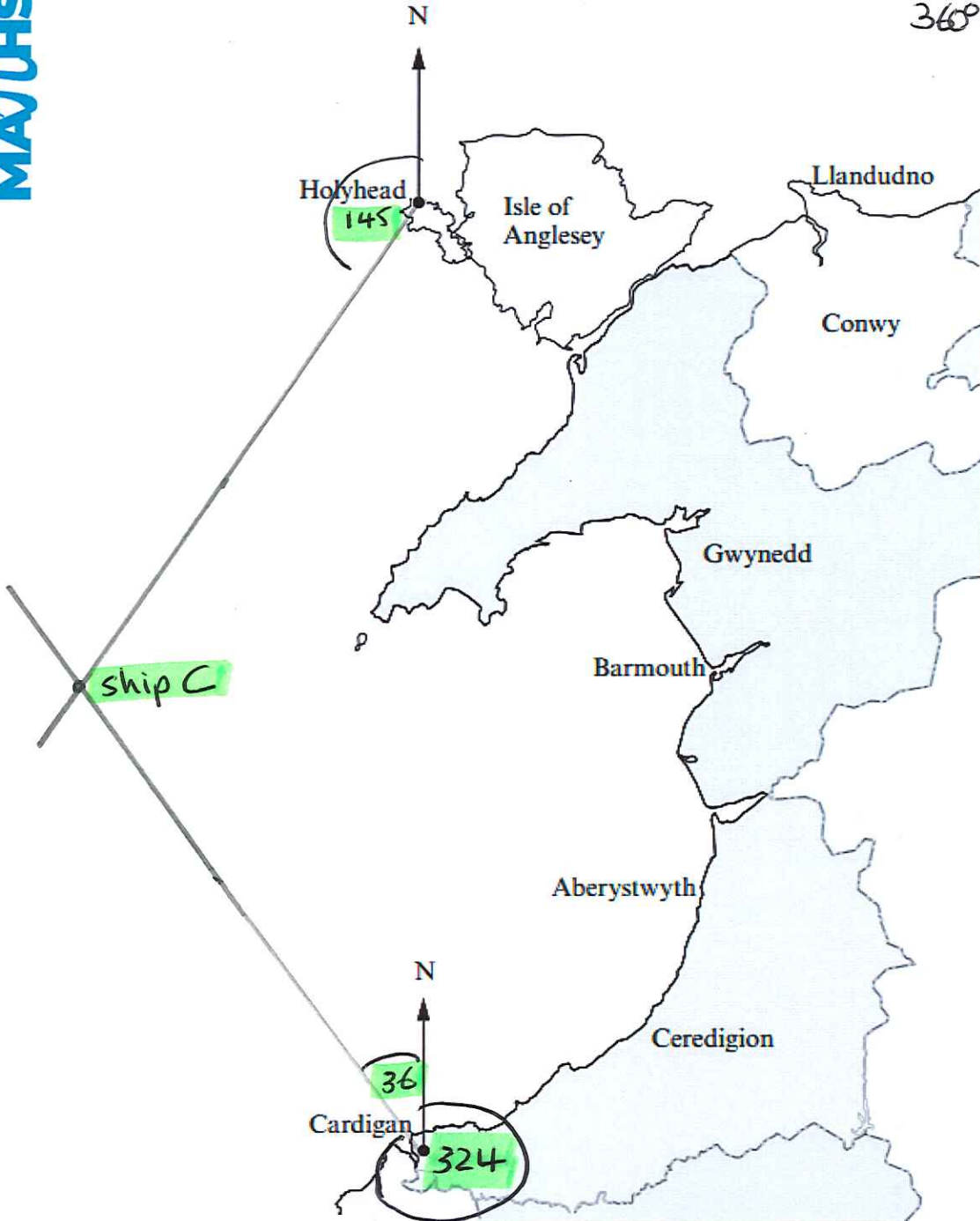
2.

A ship is on a bearing of 215° from Holyhead and on a bearing of 324° from Cardigan. By drawing suitable lines, mark the position of the ship as C.

backwards $360^\circ - 215^\circ = 145^\circ$

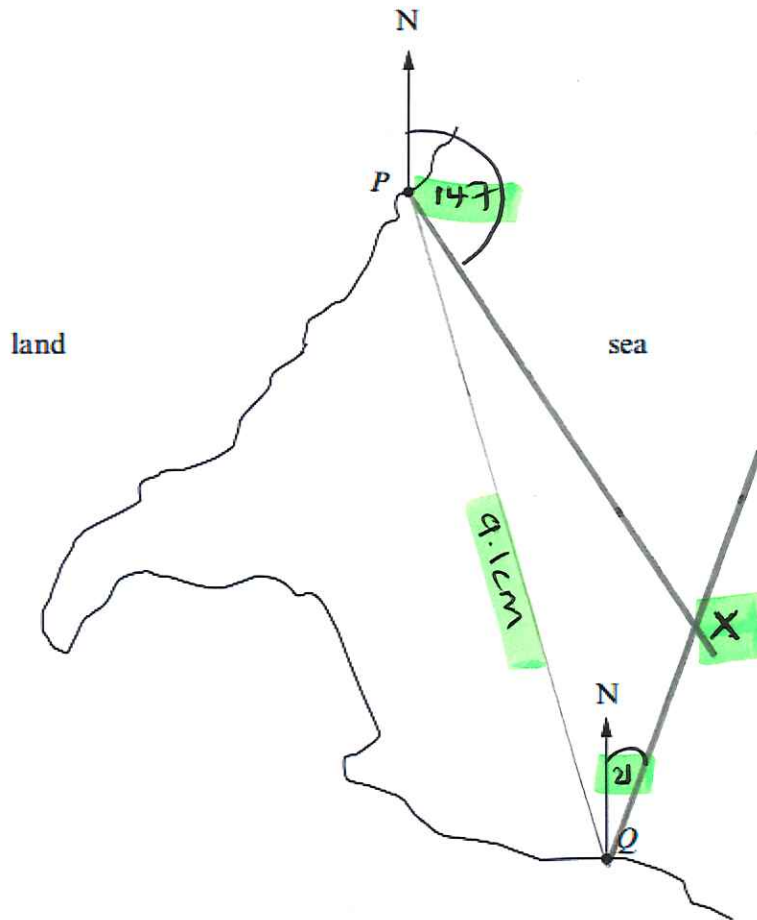


backwards [3]
 $360^\circ - 324^\circ = 36^\circ$



3.

- (a) P and Q are two ports shown on a map with scale $1 \text{ cm} = 8 \text{ km}$. Find the straight-line distance, in km, from P to Q .



$$9.1 \text{ cm} \times 8 = \underline{\underline{72.8 \text{ km}}} \quad (72 \text{ km} - 73.6 \text{ km})$$

allow $\pm 1 \text{ mm}$

[3]

- (b) A ship is on a bearing of 147° from P and on a bearing of 021° from Q . Plot the position of the ship and mark it X .

[3]

4.

On the map below, 1 cm represents 5 km.

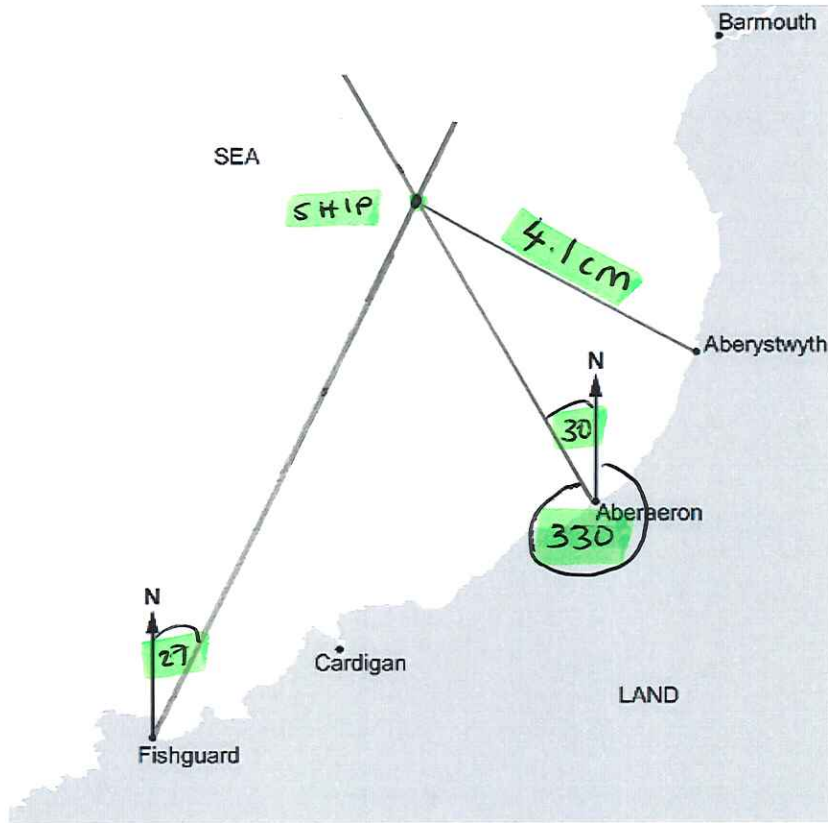
backwards 30°

A ship is on a bearing of 027° from Fishguard and 330° from Aberaeron.

How far is the ship from Aberystwyth?

You must show all the lines you need to draw on the map.

[4]



$$4.1 \text{ cm} \times 5 = 20.5 \quad \pm 1 \text{ mm}$$

$$4 \text{ cm} - 4.2 \text{ cm}$$

Distance of the ship from Aberystwyth = 20.5 km

(20 km - 21 km)

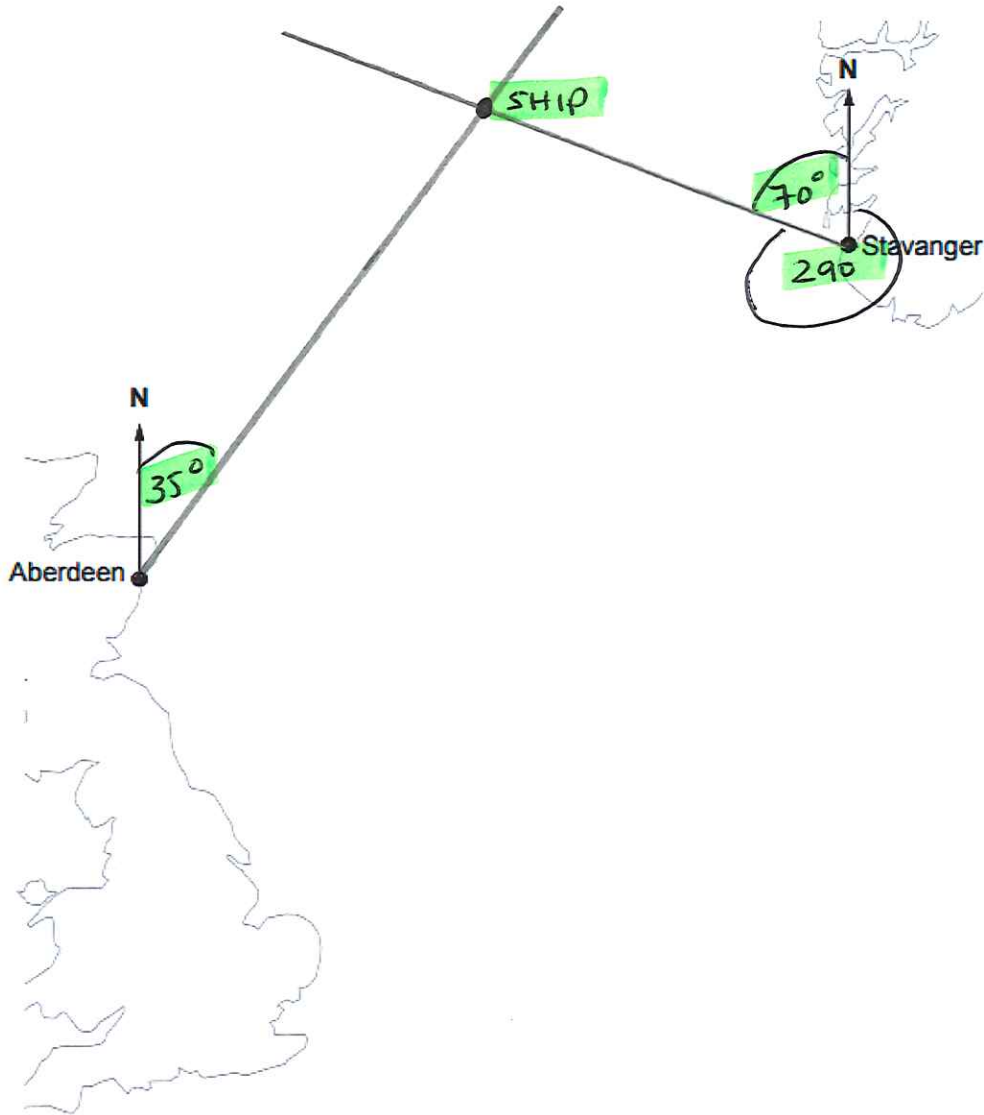
5.

backwards 70°

The map shows a scale diagram of part of the North Sea coastline.

A ship is on a bearing of 035° from Aberdeen in Scotland and on a bearing of 290° from Stavanger in Norway.

By drawing suitable lines on the diagram below, find and mark the position of the ship. [3]

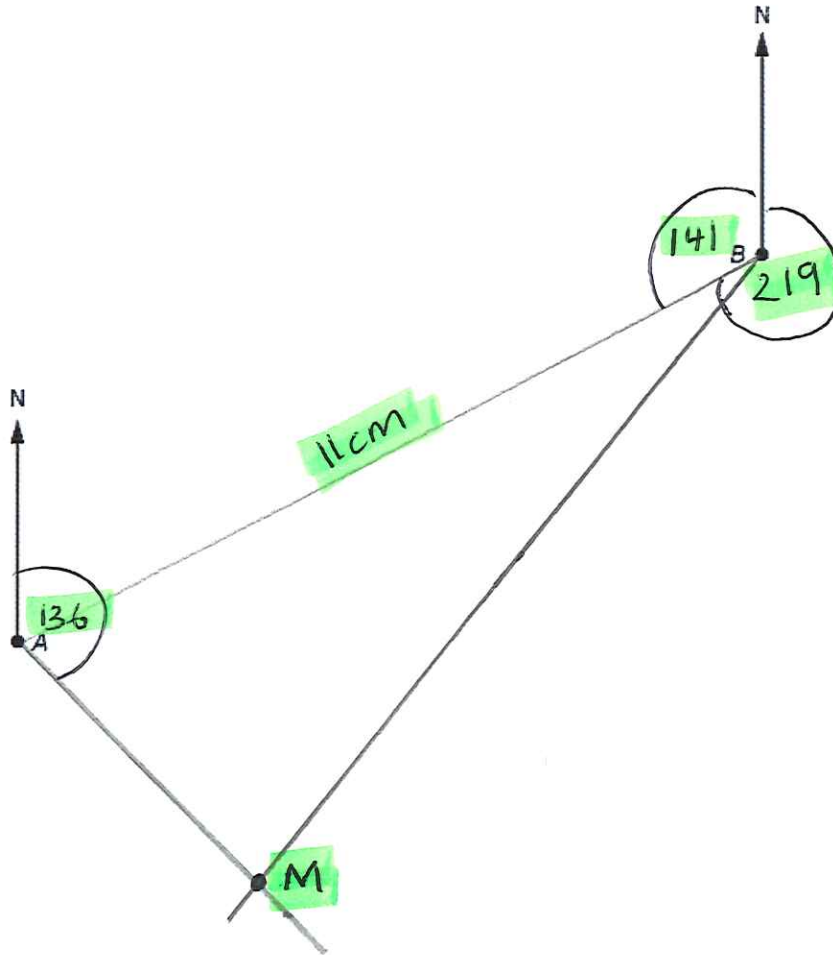


6.

(a) A and B are two rescue centres shown on a map with scale 1 cm = 5 km.

Measure and find the straight line distance, in km, from A to B.

[3]



$11\text{ cm} \times 5 = \underline{55\text{ km}}$

$\pm 1\text{ mm } (10.9 - 11.1)$
 gives $\underline{54.5\text{ km} - 55.5\text{ km}}$

(b) A monument is on a bearing of 136° from A and on a bearing of 219° from B. Plot the position of the monument and mark it M.

[3]

backwards
 $360 - 219 = 141^\circ$