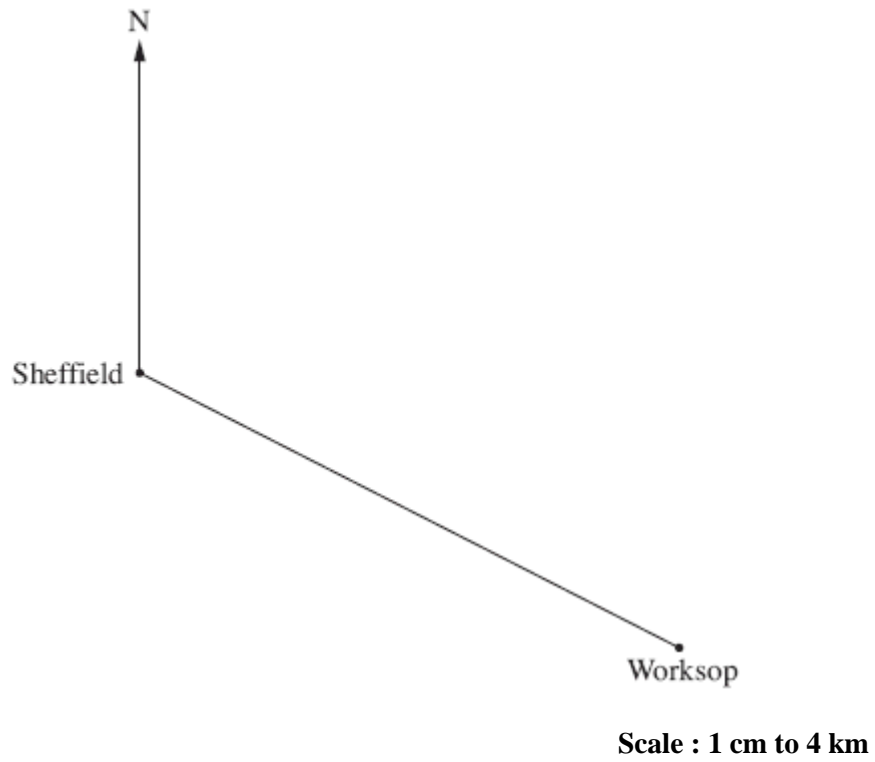


1. This scale drawing shows the positions of two places, Sheffield and Worksop.



(a) (i) Measure the bearing of Worksop from Sheffield.

.....°

[1]

(ii) Work out the **real** distance between Sheffield and Worksop.

..... km

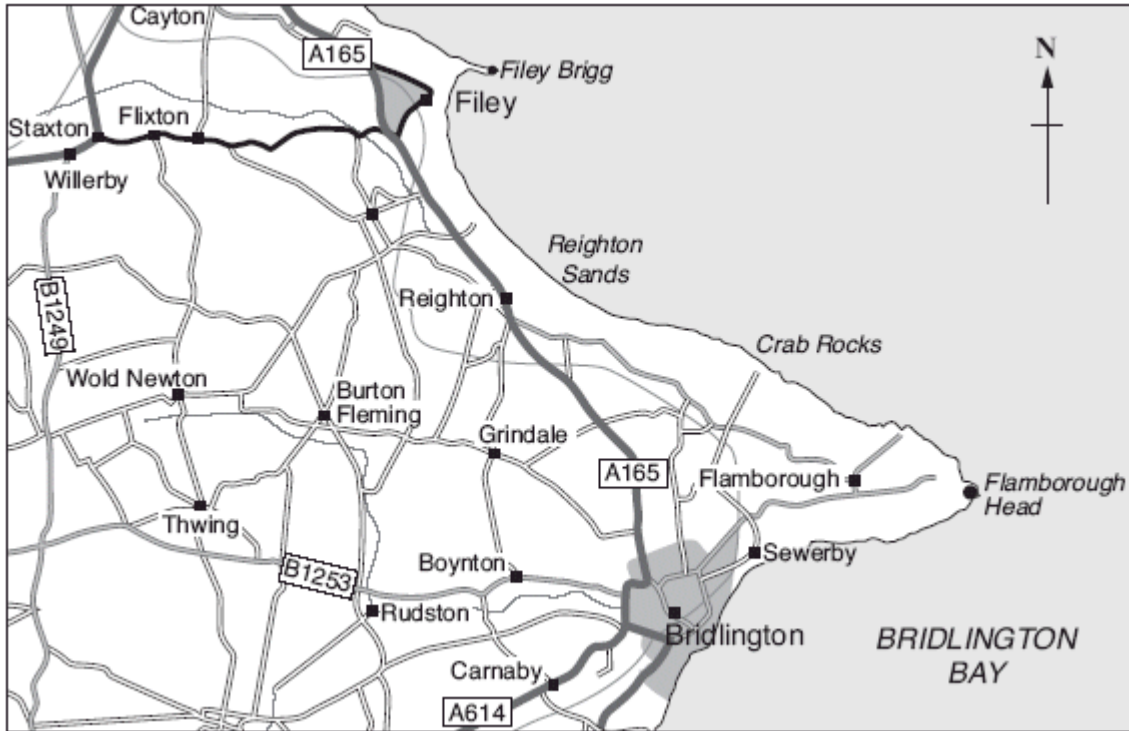
[2]

(b) Doncaster is 26 km from Sheffield on a bearing of 057° .

On the scale drawing above, mark and label D, the position of Doncaster.

[2]

2. This is a map of part of Yorkshire.
The position of each town is shown by ■.



Scale: 1 cm to 2 km

- (a) What is the bearing of Flamborough Head from Bridlington?

.....°

[1]

- (b) George is cycling from Filey to Bridlington along the A165.

- (i) Estimate the real distance from Filey to Bridlington.

..... km

[2]

- (ii) This formula gives the energy used on a cycle journey.

$$E = 33 \times D \div 2$$

where E = energy in joules
 D = distance in kilometres

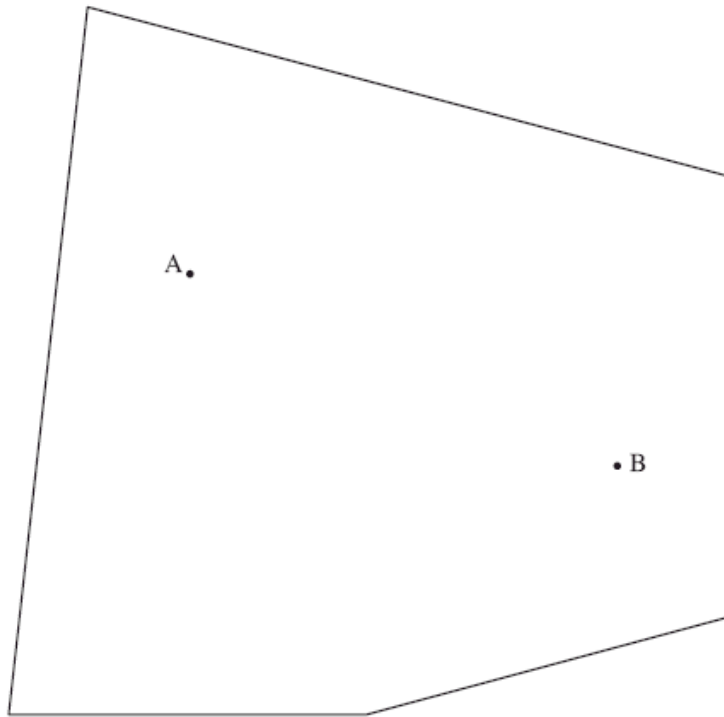
Work out how much energy George uses for this journey.

..... joules

[2]

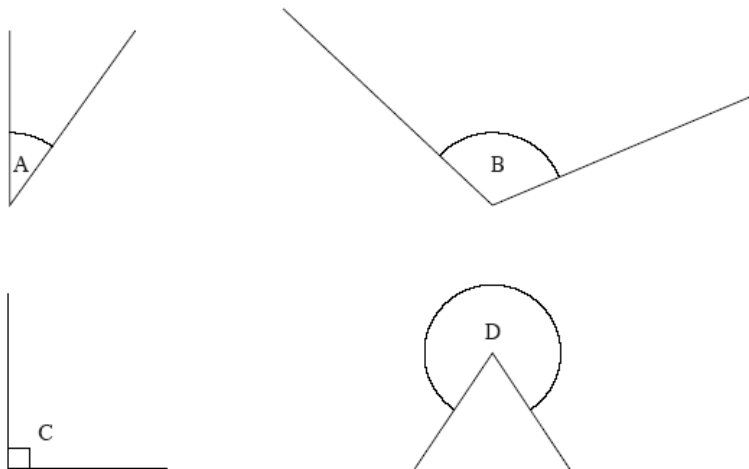
3. This scale drawing shows a field, with two trees A and B. A path crosses the field, keeping an equal distance from the two trees.

Use ruler and compasses to construct the locus of the path.
Leave in all your construction lines.



[2]

4. Here are four angles.



- (a) Which angle is obtuse?

.....

[1]

- (b) What type of angle is angle A?

.....

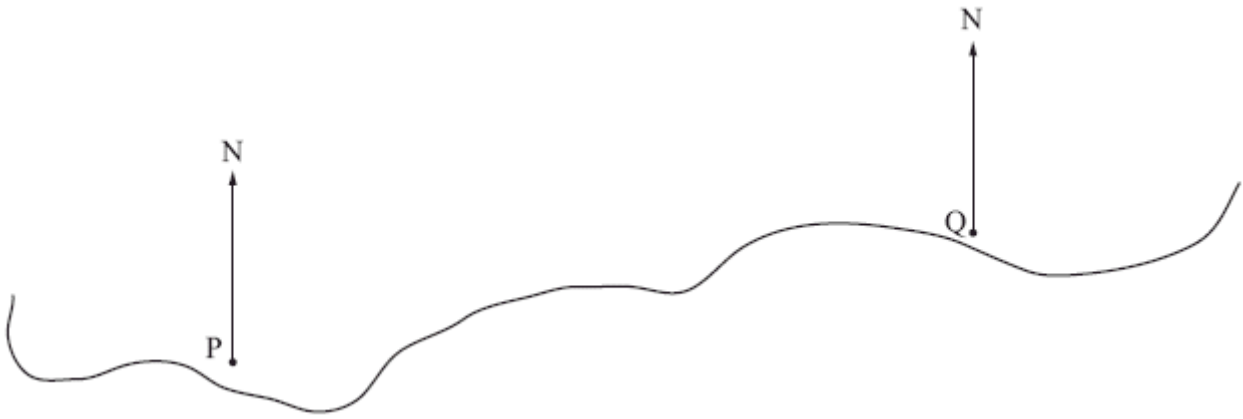
[1]

- (c) Measure angle B.

.....^o

[1]

5. The map shows two viewpoints, P and Q, on an island.

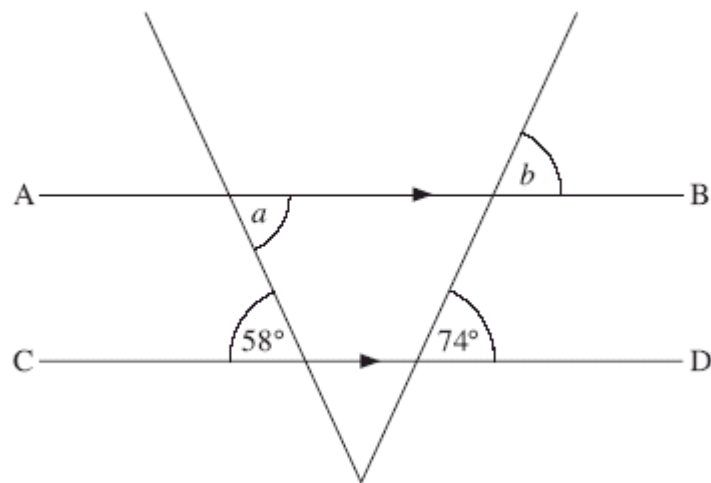


A boat is seen on a bearing of 126° from P and 208° from Q.

Construct on the map the position of the boat.
Label it B.

[3]

6. In the diagram, AB is parallel to CD.



Not to scale

Complete each of these sentences by giving a reason.

Angle $a = 58^\circ$ because

.....

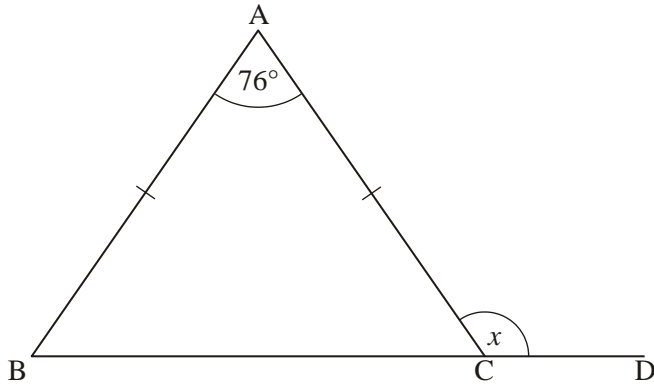
[1]

Angle $b = 74^\circ$ because

.....

[1]

7.



Not to scale

In the diagram, $AB = AC$ and BCD is a straight line.

Work out angle x .

Give a reason for each step of your answer.

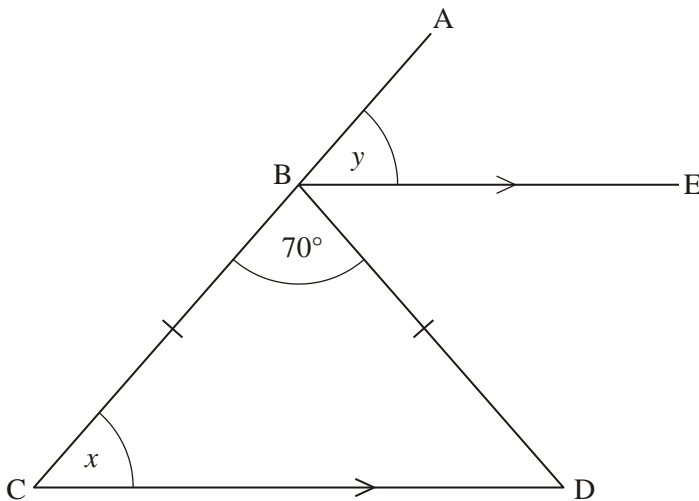
$x = \dots\dots\dots^\circ$ because

.....

.....

[5]

8.



Not to scale

In the diagram, ABC is a straight line.

BE is parallel to CD and $BC = BD$.

Angle $CBD = 70^\circ$.

(a) Complete this sentence.

$x = 55^\circ$ because

.....

[1]

(b) Find angle y .

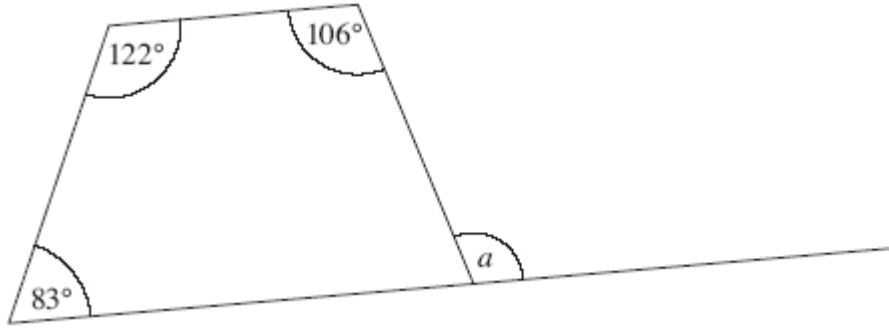
Give a reason for your answer.

$y = \dots\dots\dots^\circ$ because

.....

[2]

9.



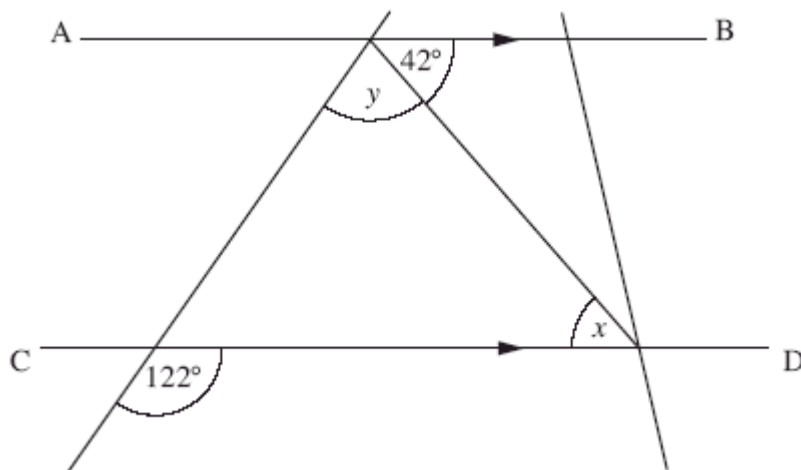
Not to scale

Work out angle a .
Give a reason for each stage of your working.

Angle $a = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$
 $\dots\dots\dots$

[3]

10.



Not to scale

In the diagram, AB is parallel to CD.

Find angles x and y .
Give reasons for each answer.

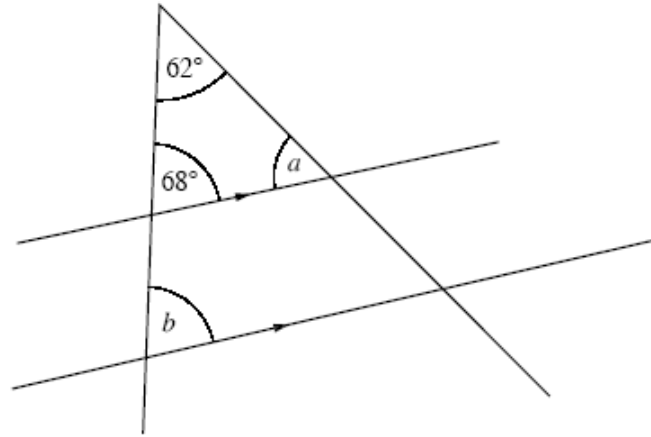
$x = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$

[2]

$y = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$

[2]

11.



Not to scale

Find the sizes of angles a and b .
Give a reason for each answer.

$a = \dots\dots\dots^\circ$ because

.....

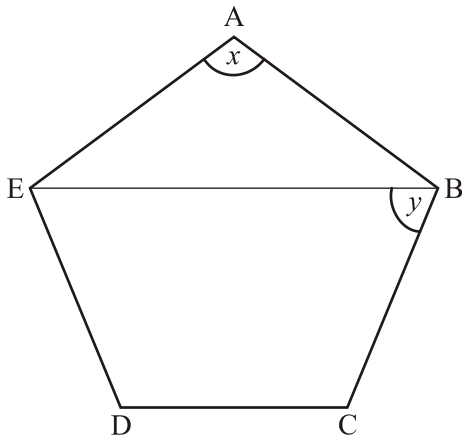
[2]

$b = \dots\dots\dots^\circ$ because

.....

[2]

12. ABCDE is a regular pentagon.



(a) Work out angle x .

.....^o

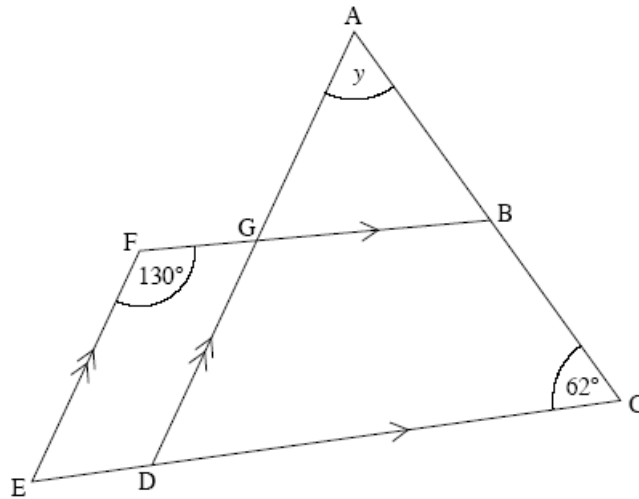
[2]

(b) Work out angle y .

.....^o

[2]

13. In this diagram, FB is parallel to EC and EF is parallel to DA.
 Angle EFG = 130° and angle ACD = 62° .



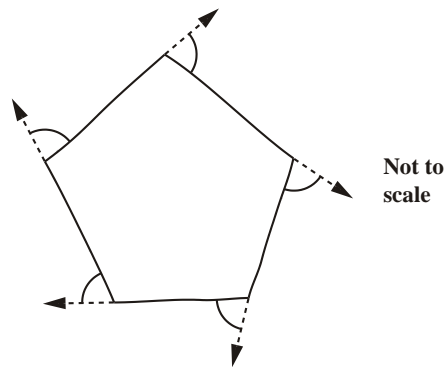
Not to scale

Calculate angle y .
 Show your working clearly.

..... $^\circ$

[3]

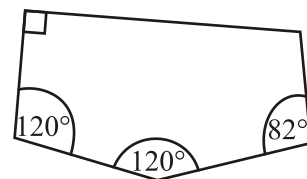
14. (a) Show that the exterior angle of a regular pentagon is 72° .



[1]

- (b) Four of the interior angles of an irregular pentagon are 90° , 120° , 116° and 82° .

Calculate the size of the remaining interior angle.



..... $^\circ$

[3]