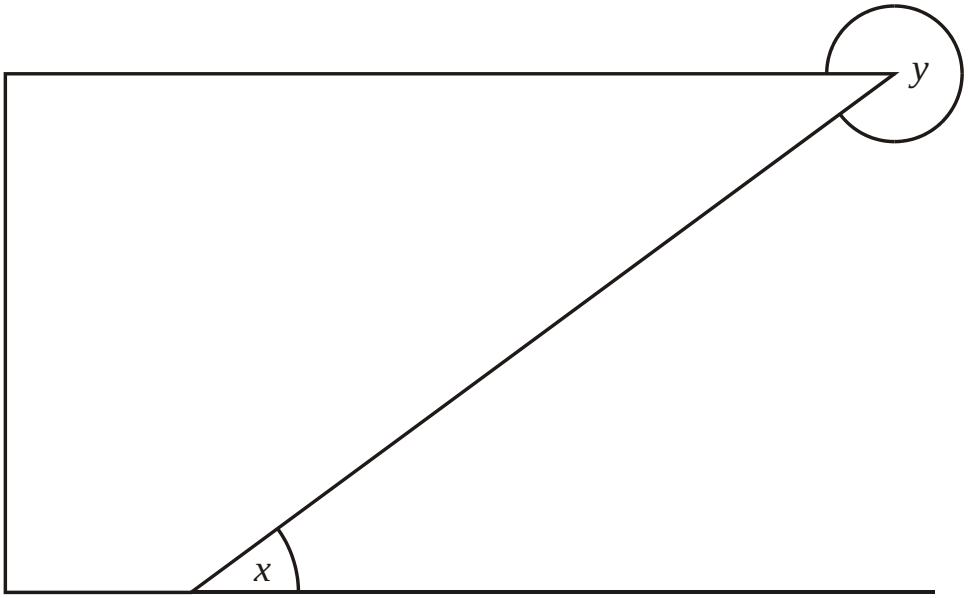
1. The lines in the diagram are straight.



(a) Mark with arrows, (>>), a pair of parallel lines.

(1)

(b) Mark with the letter R, a right angle.

(1)

(c) What type of angle is shown by the letter

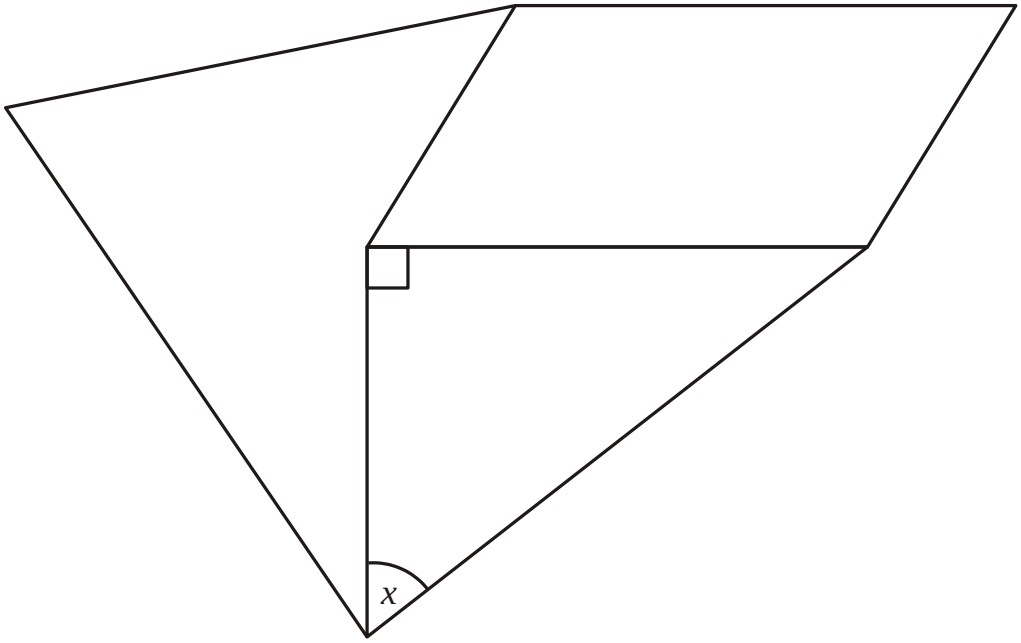
(i) *x*, ...

(ii) *y*. .....

(2)

(Total 4 marks)

2. The shape is made from a right-angled triangle, a parallelogram and a quadrilateral.



(a) Mark with arrows (») a pair of parallel lines.

(1)

(b) Mark with the letter *A* an acute angle.

(1)

(c) Mark with the letter *R* a reflex angle.

(1)

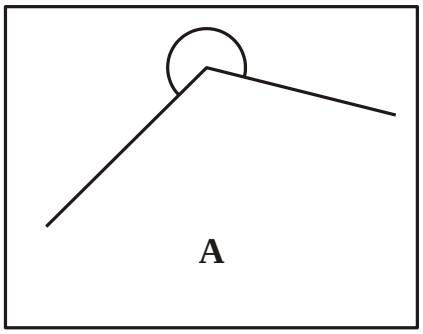
(d) Measure the size of angle x.

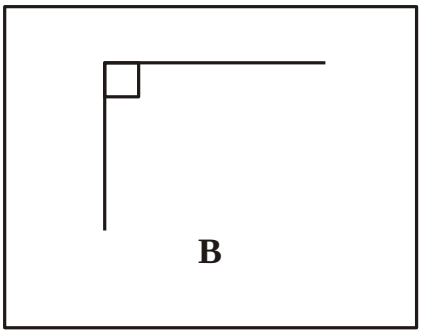
.....°

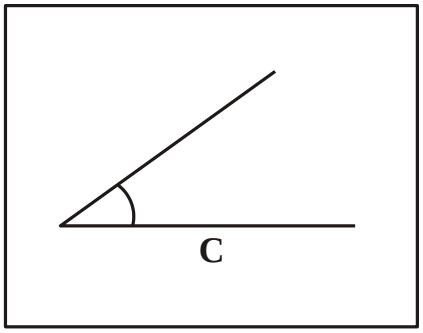
(1)

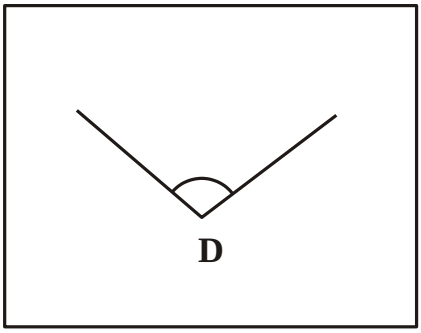
(Total 4 marks)

3.









One of the four angles marked in the diagrams above is an obtuse angle.

(a) Write down the letter of the diagram in which the obtuse angle is marked.

.....

(1)

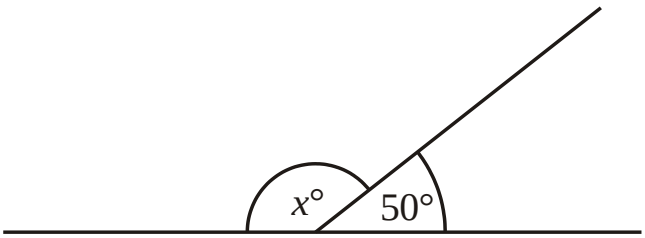


Diagram **NOT** accurately drawn

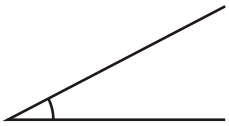
(b) Work out the size of the angle marked $x°$.

..... °

(2)

(Total 3 marks)

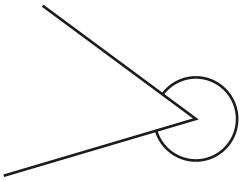
4. (a) Write down the special name for this type of angle.



.....

(1)

(b) Write down the special name for this type of angle.



.....

(1)

(c)

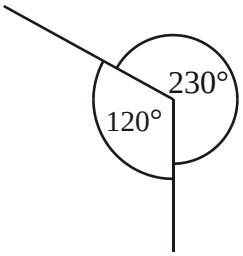


Diagram **NO**T accurately drawn

This diagram is wrong.
Explain why

.....

.....

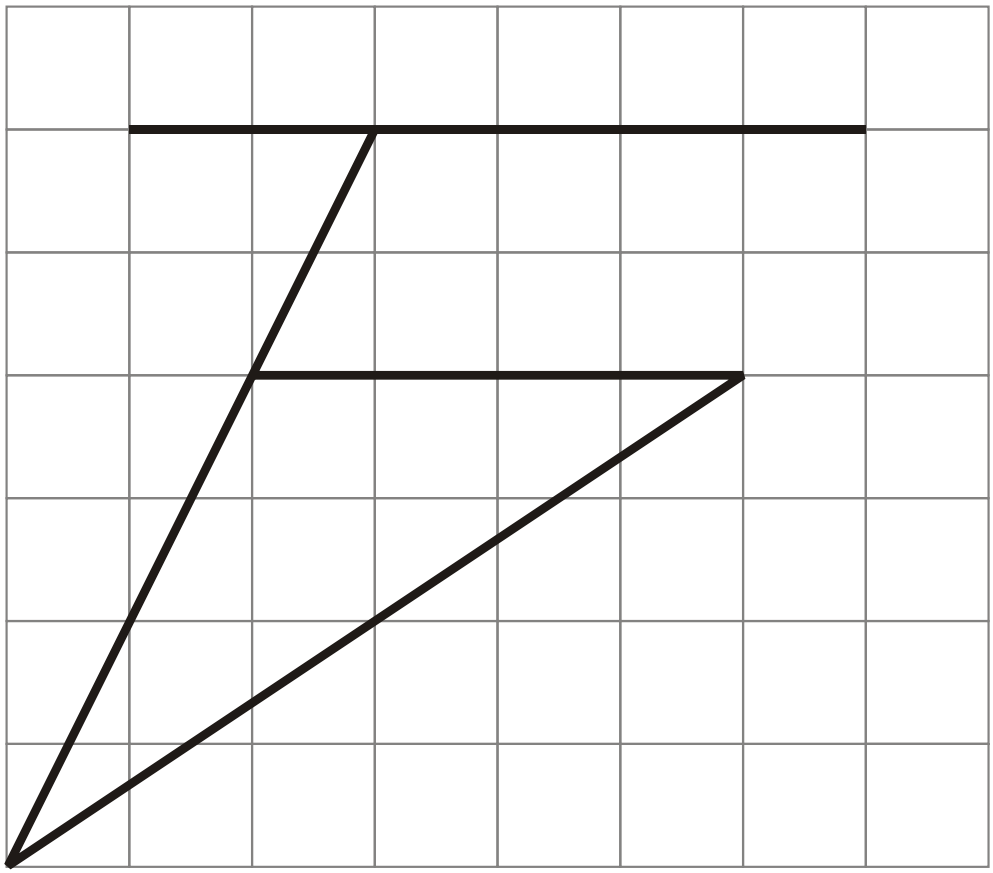
.....

.....

(1)

(Total 3 marks)

5. Here is a diagram drawn on a square grid.



(a) Mark, with arrows (>>), a pair of parallel lines.

(1)

(b) Mark, with the letter A, an acute angle.

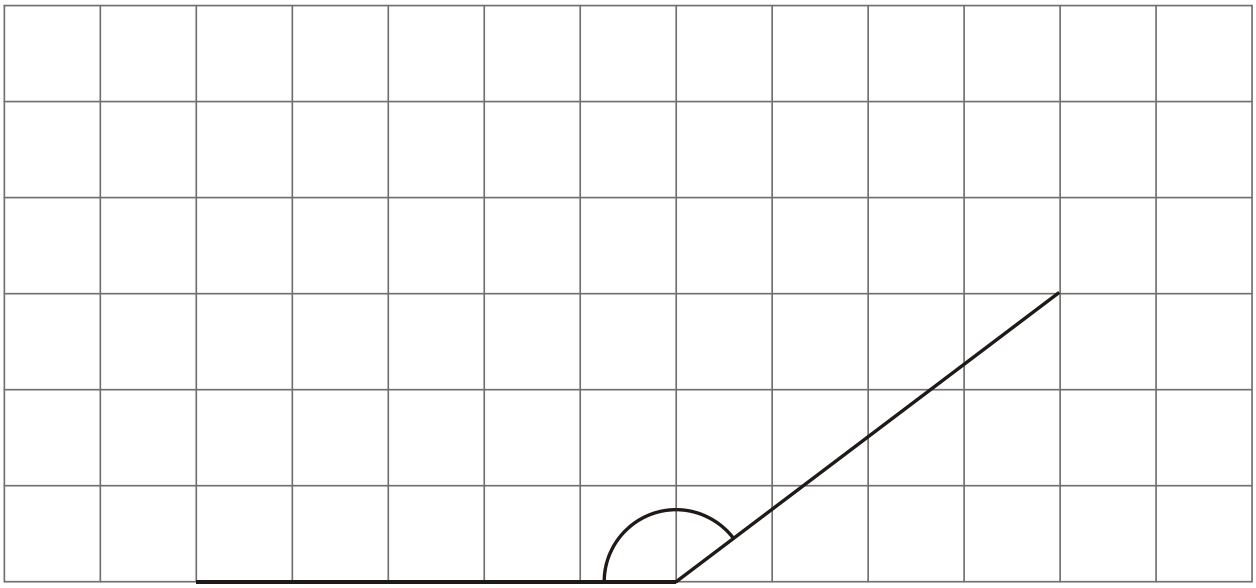
(1)

(c) Mark, with the letter O, an obtuse angle.

(1)

(Total 3 marks)

6. The diagram shows two sides of a rhombus drawn on a grid of centimetre squares.



(a) (i) Measure the size of the angle between these two sides.

.....°

(ii) What type of angle have you measured?

.....

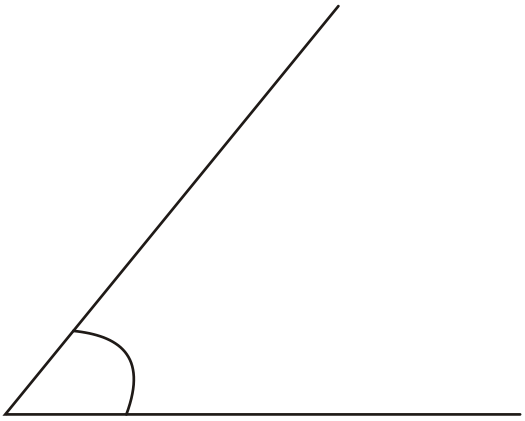
(2)

(b) Complete accurately the drawing of the rhombus.

(1)

(Total 3 marks)

7. The diagram shows an angle.



(a) Write down the special name for this type of angle.

.....

(1)

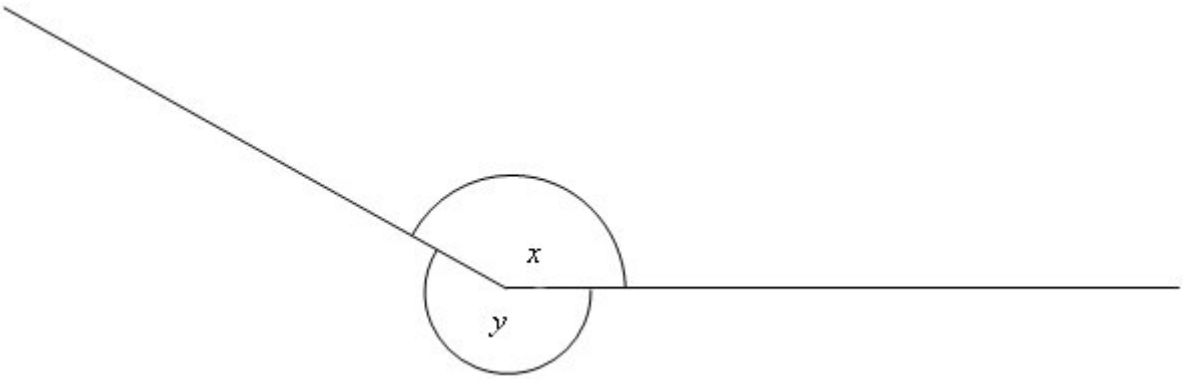
(b) Measure the size of the angle.

.....°

(1)

(Total 2 marks)

8.



(a) Measure the size of the angle marked *x*.

.....°

(1)

(b) What type of angle is shown by the letter *y* ?

.....

(1)

(Total 2 marks)

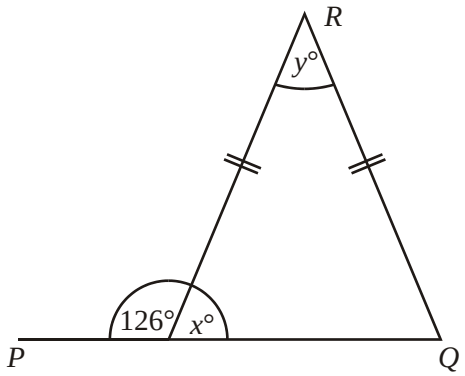


Diagram **NOT** accurately drawn

PQ is a straight line.

(a) Work out the size of the angle marked $x°$.

.....°

(1)

(b) (i) Work out the size of the angle marked $y°$.

.....°

(ii) Give reasons for your answer.

.....

.....

(3)

(4 marks)

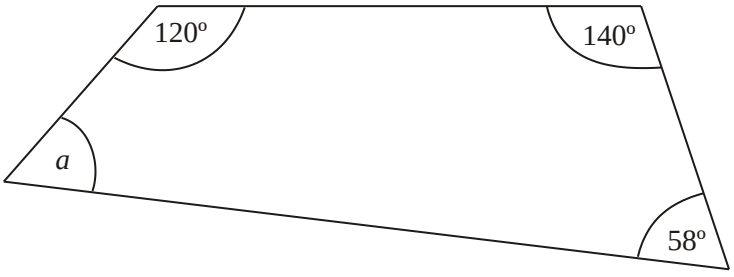


Diagram **NOT** accurately drawn

Work out the size of the angle *a*.

.....°

(2 marks)

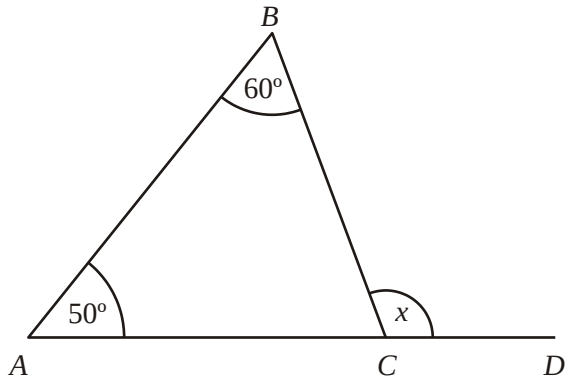


Diagram **NOT** accurately drawn

In the diagram, *ABC* is a triangle.
ACD is a straight line.
Angle *CAB* = 50°.
Angle *ABC* = 60°.

Work out the size of the angle marked *x*.

.....°

(2 marks)

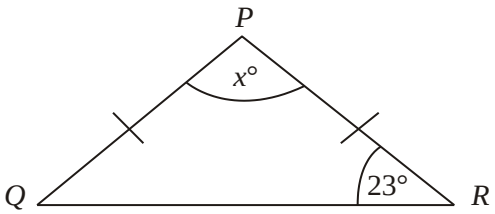


Diagram **NOT** accurately drawn

PQR is an isosceles triangle.

PQ = *PR*.
Angle *R* = 23°.

Work out the value of *x*.

x = ...

(2 marks)

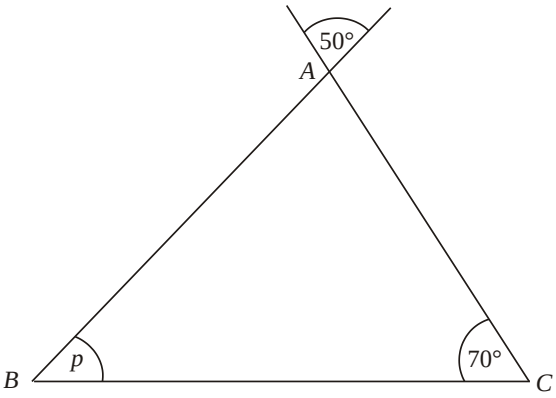


Diagram **NOT** accurately drawn

ABC is a triangle.

Work out the size of the angle marked *p*.

p = ...°

(2 marks)

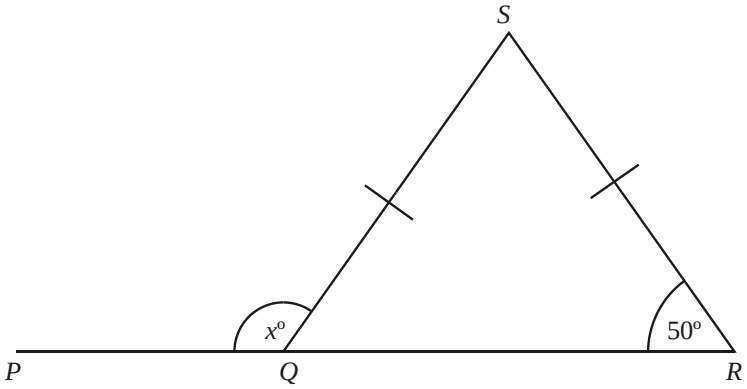


Diagram **NOT** accurately drawn

PQR is a straight line.
SQ = *SR*.

(i) Work out the size of the angle marked *x*°

.....°

(ii) Give reasons for your answer.

.....

.....

(3 marks)

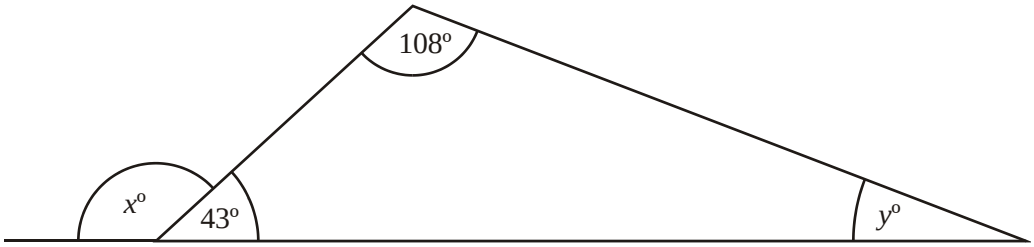


Diagram **NOT** accurately drawn

(a) Work out the value of x.

x = ...

(1)

(b) Work out the value of y.

y = ...

(2)

(3 marks)

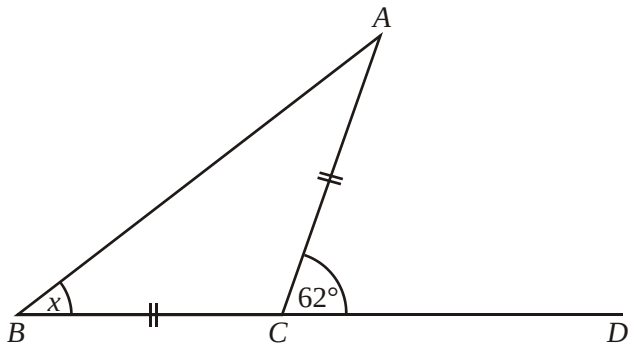


Diagram **NOT** accurately drawn

Triangle ABC is isosceles, with $AC = BC$.

Angle $ACD = 62^0$.

BCD is a straight line.

Work out the size of angle x.

x = ...^{0}

(2 marks)

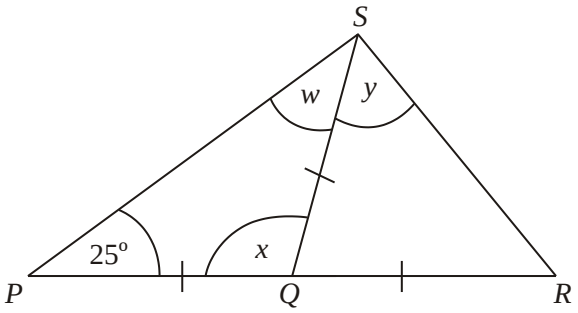


Diagram **NOT** accurately drawn

PQR is a straight line.

PQ = *QS* = *QR*.

Angle *SPQ* = 25°.

(a) (i) Write down the size of angle *w*.

.....°

(ii) Work out the size of angle *x*.

.....°

(2)

(b) Work out the size of angle *y*.

.....°

(2)

(4 marks)

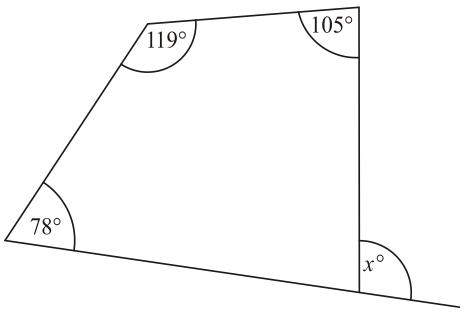


Diagram **NOT** accurately drawn

Work out the value of *x*.

x = ...

(3 marks)

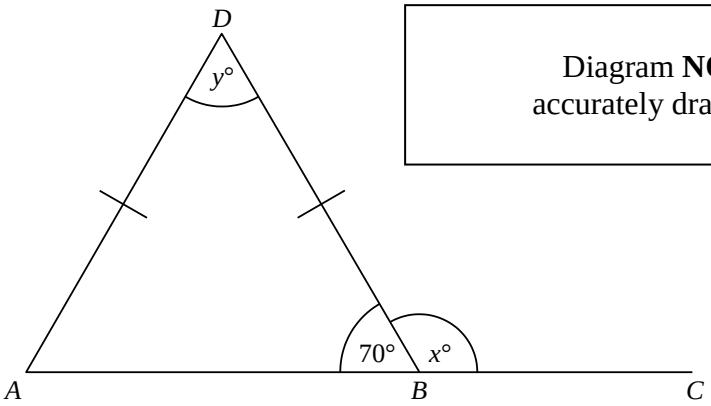


Diagram **NOT** accurately drawn

ABD is a triangle. *ABC* is a straight line.
Angle *ABD* = 70°.
AD = *BD*.

(a) (i) Work out the value of *x*.

x = ...

(ii) Give a reason for your answer.

.....

(2)

(b) (i) Work out the value of *y*.

y = ...

(ii) Give a reason for your answer.

.....

.....

(3)

(5 marks)

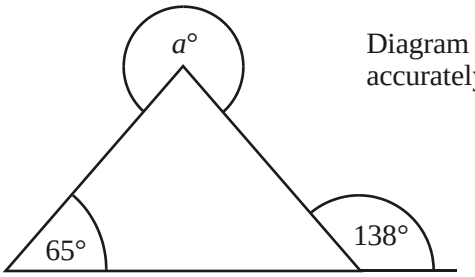


Diagram **NOT** accurately drawn

Work out the value of *a*.

a = ...

(3 marks)

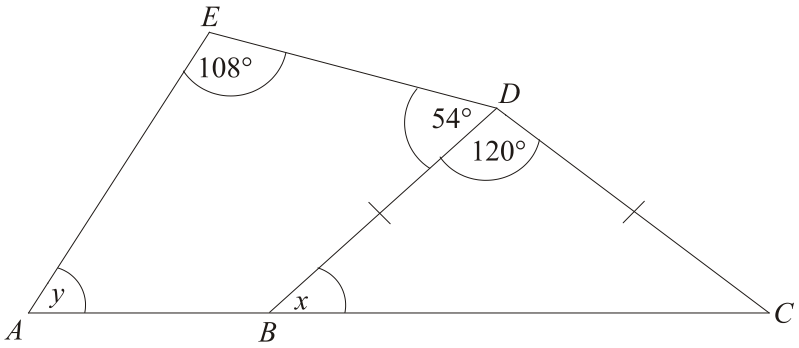


Diagram **NOT** accurately drawn

In the diagram, *ABC* is a straight line and *BD* = *CD*.

(a) Work out the size of angle *x*.

.....°

(2)

(b) Work out the size of angle *y*.

.....°

(3)

(5 marks)

1.

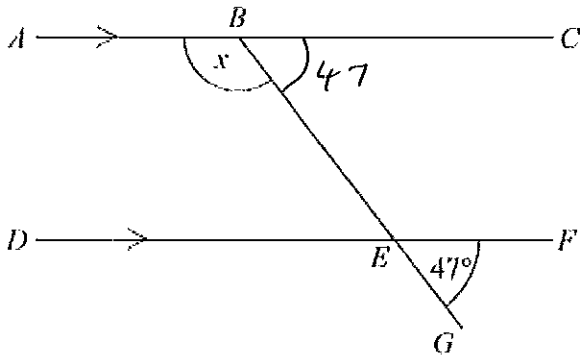


Diagram **NOT** accurately drawn

ABC and *DEF* are parallel lines.
BEG is a straight line.
Angle *GEF* = 47°.

Work out the size of the angle marked *x*.

Give reasons for your answer.

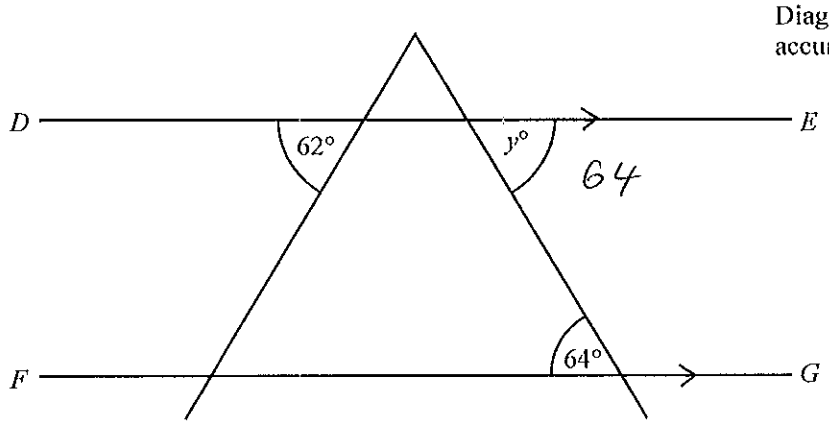
$C\hat{B}E = 47°$ corresponding angles are equal

$x = 133°$ Angles on a straight line add up to 180°

133 .....°

(3 marks)

2.



DE is parallel to *FG*.

(i) Find the size of the angle marked $y°$.

64 °

(1)

(ii) **Give a reason for your answer.**

alternate angles are equal

(2)

(3 marks)

3.

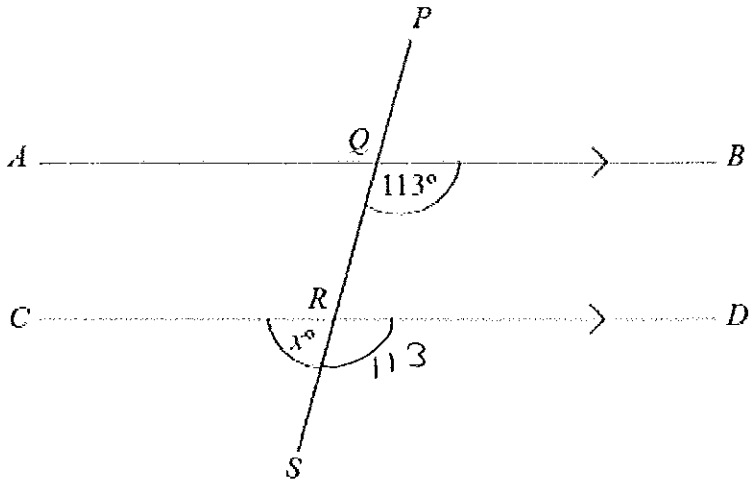


Diagram **NOT** accurately drawn

AQB, *CRD* and *PQRS* are straight lines.

AB is parallel to *CD*.

Angle *BQR* = 113°.

(a) Work out the value of *x*.

x = 67

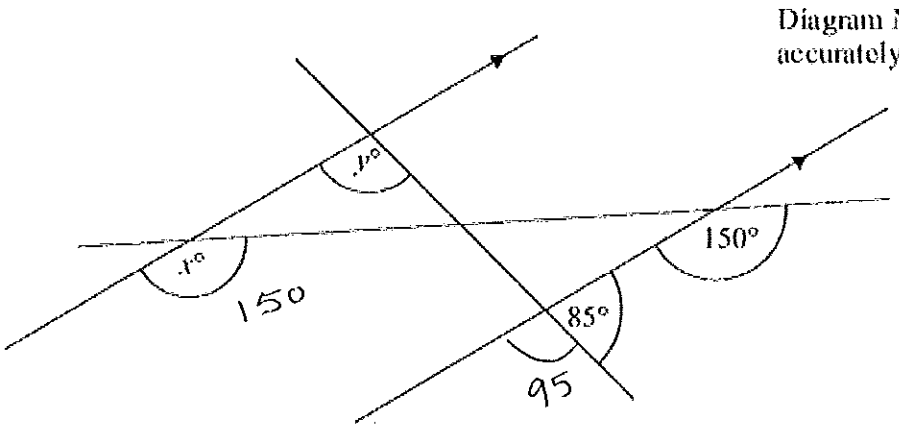
(b) Give reasons for your answer.

corresponding angles are equal

angles on a straight line add up to 180°

(4 marks)

4.



(a) i) Find the value of x.

150

(1)

ii) Give reasons for your answer.

Corresponding angles are equal

(1)

(b) i) Find the value of y.

95°

(2)

ii) Give reasons for your answer.

angles on a straight line add up to 180°
corresponding angles are equal

(2)

(6 marks)

*5.

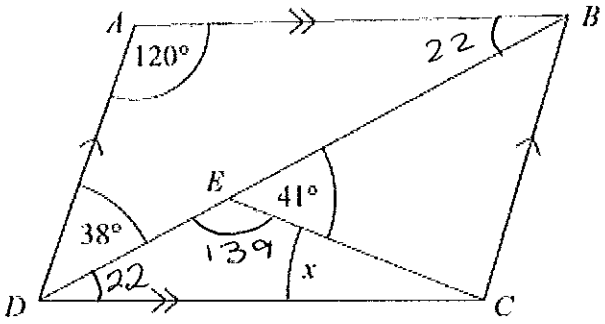


Diagram **NOT** accurately drawn

ABCD is a parallelogram.

Angle *ADB* = 38°.
Angle *BEC* = 41°.
Angle *DAB* = 120°.

Calculate the size of angle *x*.
You must give reasons for your answer.

$A\hat{B}D = 22°$ (Angles in a triangle add up to 180°)

$B\hat{D}C = 22°$ (Alternate angles are equal)

$C\hat{E}D = 139°$ (Angles on a straight line add up to 180°)

$x = 19°$ (Angles in a triangle add up to 180°)

(4 marks)

*6.

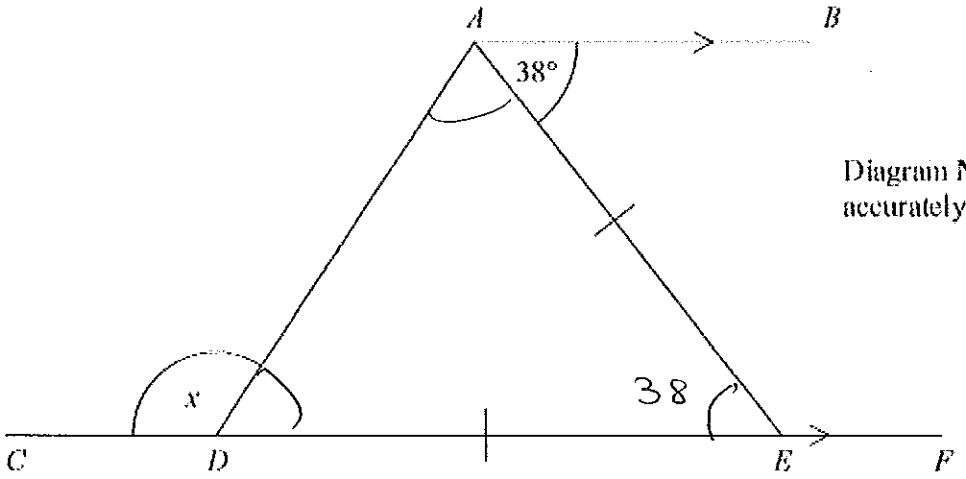


Diagram **NOT** accurately drawn

CDEF is a straight line.
AB is parallel to *CF*.
DE = *AE*.

Work out the size of the angle marked *x*.
You must give reasons for your answer.

$A\hat{E}D = 38°$ Alternate angles are equal

$A\hat{D}E$ and $D\hat{A}E = 71°$ (Angles at base of isosceles are equal)

$x = 109°$ (Angles on a straight line add up to 180°)

(4 marks)

*7.

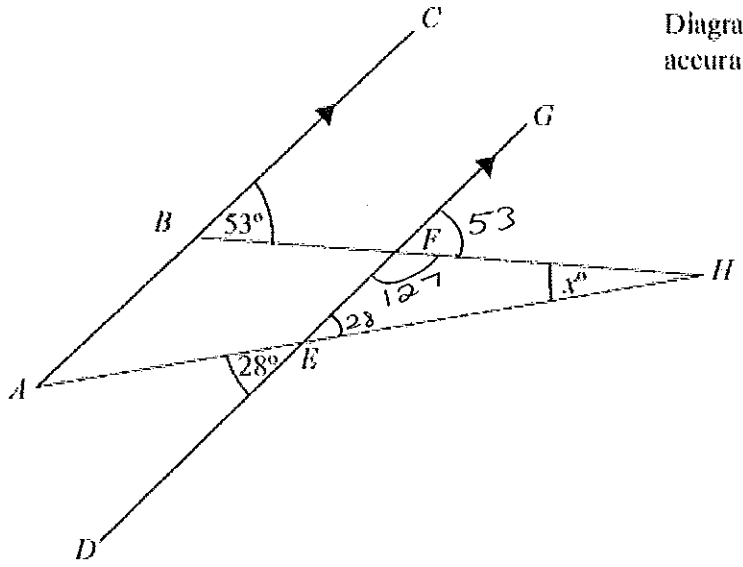


Diagram **NOT** accurately drawn

ABC and *DEFG* are parallel.
AEH and *BFH* are straight lines.
Work out the size of the angle marked $x°$.

$\hat{GEH} = 28°$ opposite angles are equal

$\hat{GFH} = 53°$ alternate angles are equal

$\hat{EFH} = 127$ angles on a straight line add to 180°

$x = 25°$ angles in a triangle add to 180°

25 .....°

(3 marks)

1. Each exterior angle of a regular polygon is 30°.

Work out the number of sides of the polygon.

.....

(2 marks)

2.

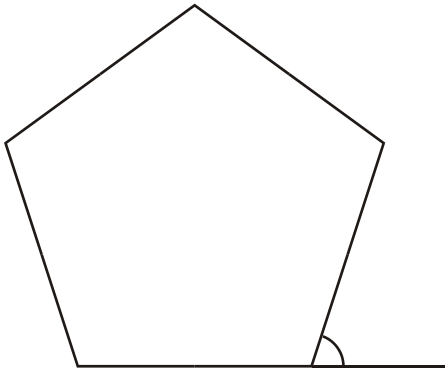


Diagram **NOT** accurately drawn

Work out the size of an exterior angle of a regular pentagon.

.....°

(2 marks)

3.

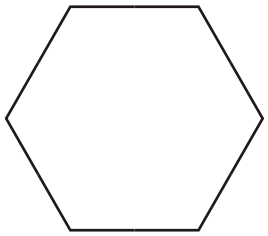


Diagram **NOT** accurately drawn

Calculate the size of the exterior angle of a regular hexagon.

.....°

(2 marks)

4. The size of each exterior angle of a regular polygon is 40°.

Work out the number of sides of the regular polygon.

.....

(2 marks)

5. The size of each interior angle of a regular polygon is 156°.
Work out the number of sides of the polygon.

.....

(3 marks)

6. Here is a regular polygon with 9 sides.

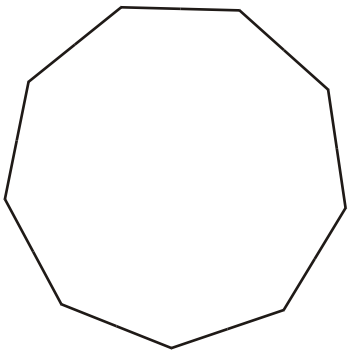


Diagram **NOT** accurately drawn

Work out the size of an exterior angle.

.....°

(2 marks)

7.

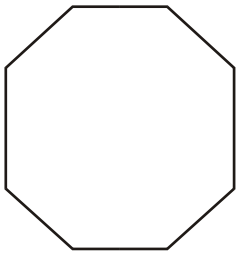


Diagram **NOT** accurately drawn

(a) Work out the size of each interior angle of a regular octagon.

.....

(3)

The size of each exterior angle of a regular polygon is 30^0

(b) Work out the number of sides of the polygon.

.....

(2)

(5 marks)

8.

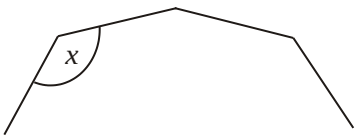


Diagram **NOT** accurately drawn

The diagram shows part of a **regular** 10-sided polygon.

Work out the size of the angle marked x.

.....°

(3 marks)

9.

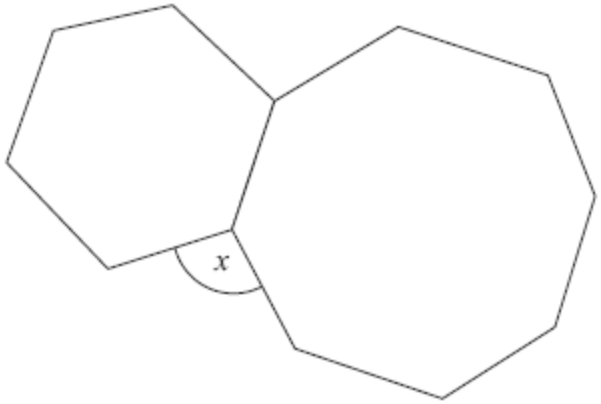


Diagram **NOT** accurately drawn

The diagram shows a regular hexagon and a regular octagon.

Calculate the size of the angle marked x.
You must show all your working.

.....°

(4 marks)

10.

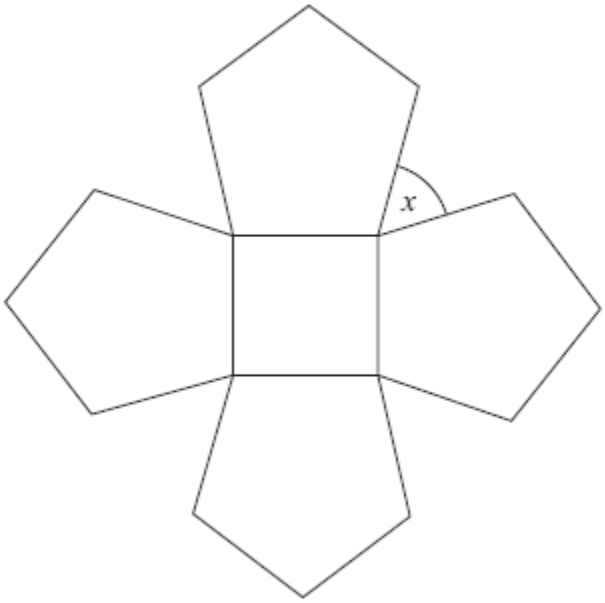


Diagram **NOT** accurately drawn

The diagram shows a square and 4 regular pentagons.

Work out the size of the angle marked x.

..... °

(4 marks)

11.

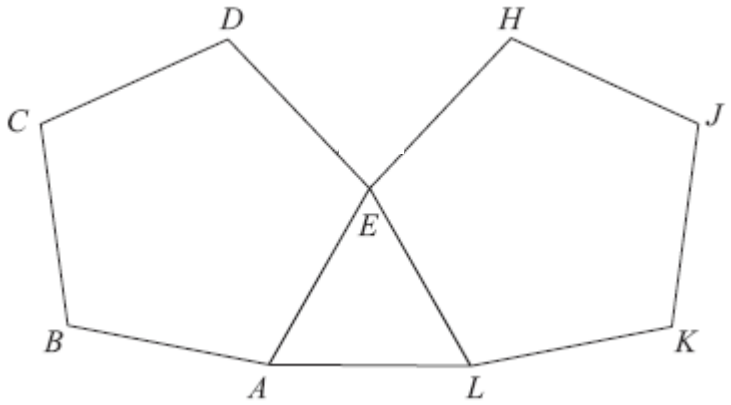


Diagram **NOT** accurately drawn

ABCDE and *EHJKL* are regular pentagons.
AEL is an equilateral triangle.

Work out the size of angle *DEH*.

..... °

(4 marks)

12. The diagram shows part of a pattern made from tiles.

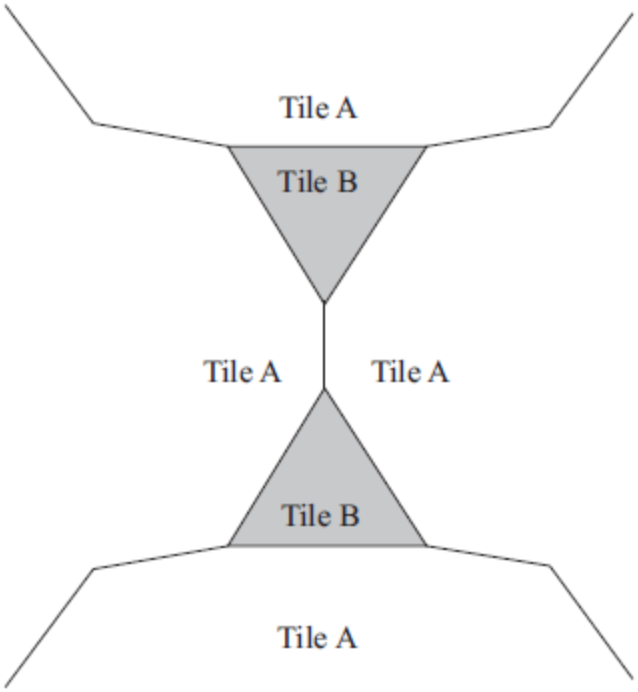


Diagram **NOT** accurately drawn

The pattern is made from two types of tiles, tile A and tile B.

Both tile A and tile B are regular polygons.

Work out the number of sides tile A has.

.....

(4 marks)

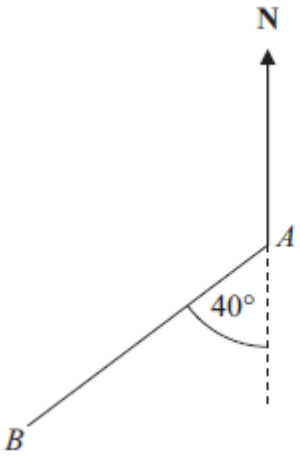
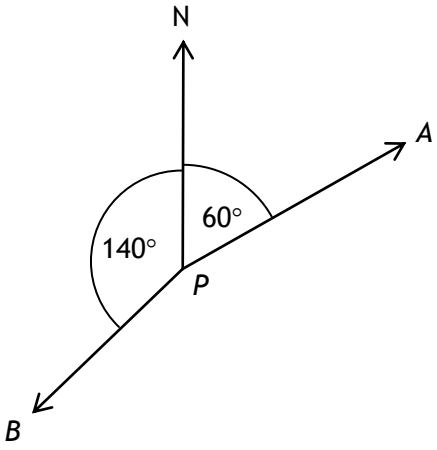


Diagram **NOT** accurately drawn

Work out the bearing of *B* from *A*.

..... °

(2 marks)



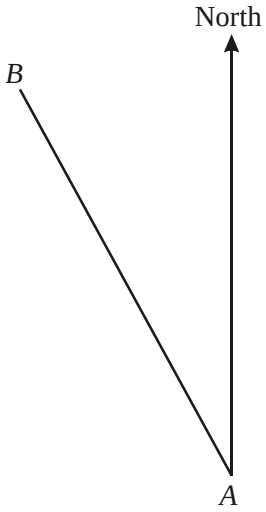
(a) Write down the bearing of *A* from *P*.

..... °

(b) Work out the bearing of *B* from *P*.

..... °

(3 marks)



(a) Measure and write down the bearing of *B* from *A*.

.....°

(1)

(b) On the diagram, draw a line on a bearing of 107° from *A*.

(1)

(2 marks)

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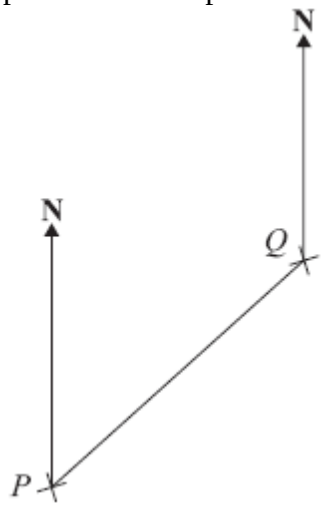
4. The diagram shows the position of two ports *P* and *Q* on a map.



(a) Measure the bearing of *Q* from *P*.

..... °

(1)

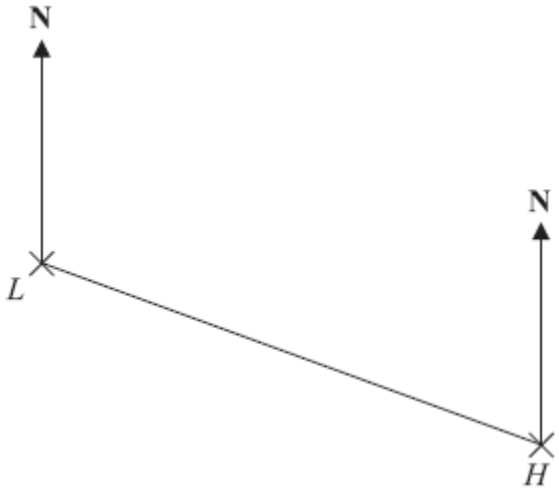
A rock *R* is on a bearing of 150° from *Q*.
On the map *R* is 6 cm from *Q*.

(b) Mark the position of *R* with a cross (×) and label it *R*.

(2)

(3 marks)

The diagram shows the position of a lighthouse L and a harbour H.



The scale of the diagram is 1 cm represents 5 km.

(a) Work out the real distance between L and H.

..... km

(1)

(b) Measure the bearing of H from L.

.....°

(1)

A boat B is 20 km from H on a bearing of 040°

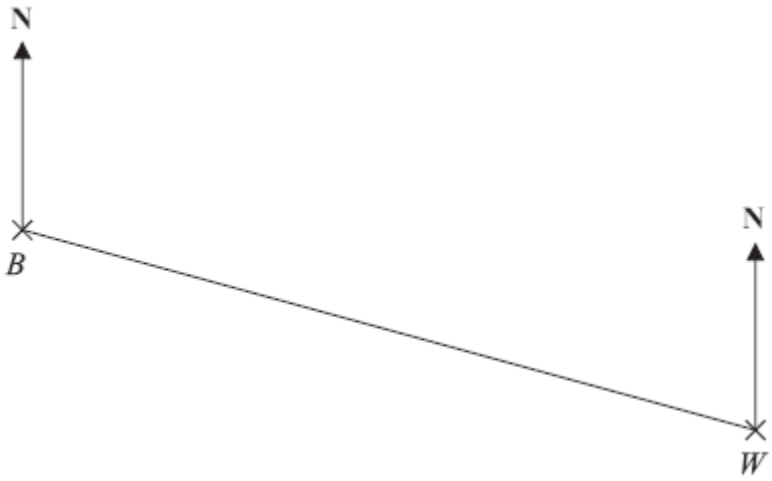
(c) On the diagram, mark the position of boat B with a cross (×).

Label it B.

(2)

(4 marks)

The diagram shows the positions of two villages, Beckhampton (*B*) and West Kennett (*W*).



Scale: 4 cm represents 1 km.

(a) Work out the real distance, in km, of Beckhampton from West Kennett.

..... km
(2)

The village, Avebury (*A*), is on a bearing of 038° from Beckhampton.

On the diagram, *A* is 6 cm from *B*.

(b) On the diagram, mark *A* with a cross (×).
Label the cross *A*.

(2)

(4 marks)

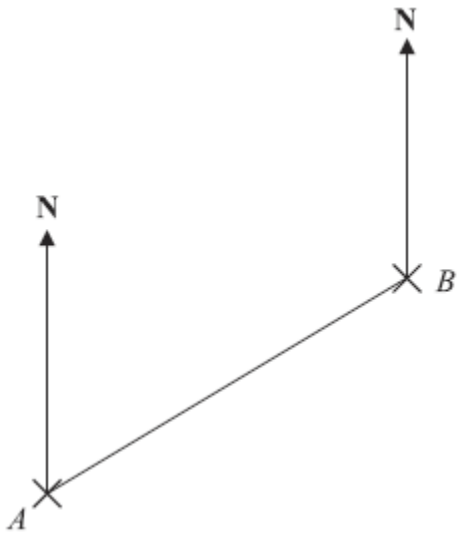
The diagram shows the position of two boats, *P* and *Q*.

The bearing of a boat *R* from boat *P* is 060^0
The bearing of boat *R* from boat *Q* is 310^0

In the space above, draw an accurate diagram to show the position of boat *R*.
Mark the position of boat *R* with a cross (×). Label it *R*.

(3 marks)

The diagram shows the positions of two telephone masts, *A* and *B*, on a map.



(a) Measure the bearing of *B* from *A*.

..... °

(1)

Another mast *C* is on a bearing of 160° from *B*.

On the map, *C* is 4 cm from *B*.

(b) Mark the position of *C* with a cross (×) and label it *C*.

(2)

(3 marks)

The bearing of a ship from a lighthouse is 050°

Work out the bearing of the lighthouse from the ship.

.....°

(2 marks)