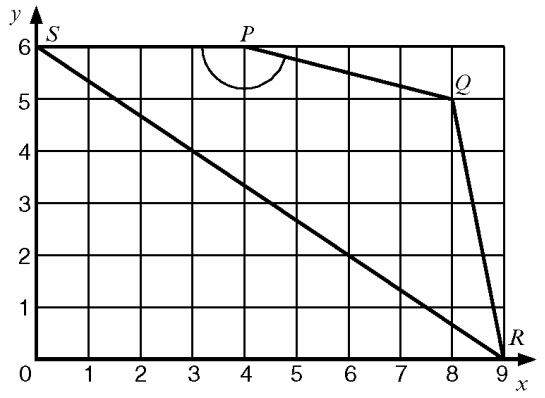
Angles GCSE Foundation

Question 1

(a) Write down the co-ordinates of the points
i) P
ii) R.



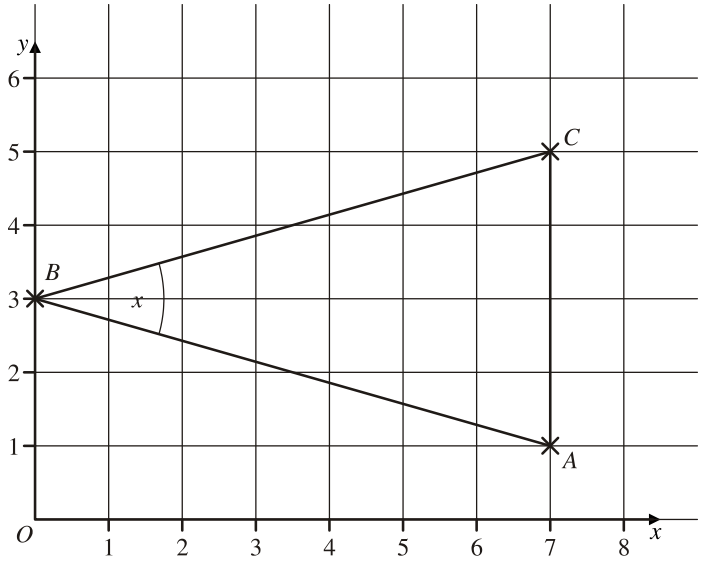
(b) On the co-ordinate grid above, plot the following points
$T(1, 2)$, $V(4, 1)$

(c) Using your ruler, find the perimeter, in centimetres, of the quadrilateral $PQRS$.

(d) Measure and write down the size of angle P.

Question 2

The diagram shows a triangle *ABC* on a centimetre grid.



(a) Write down the coordinates of the point

(i) *A*, (……. , …….)
(ii) *B*. (……. , …….)
(2 marks)

(b) Write down the special name for triangle *ABC*. **(1 mark)**

(c) Work out the area of the triangle *ABC*.

..... cm^2
(1 mark)

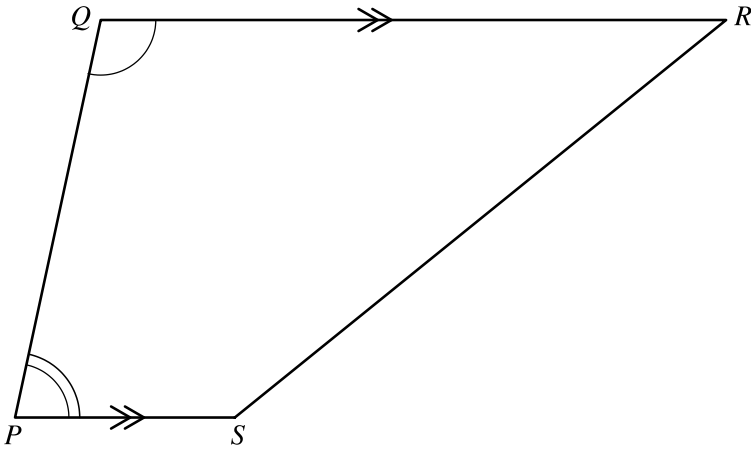
(d) Measure the length of the line *AB*.
Give your answer in millimetres.

..... mm
(1 mark)

(e) **(i)** Measure the size of angle *x*. ..... °
(ii) Write down the special name that is given to this type of angle. **(2 marks)**

(f) Draw **one** line of symmetry on the triangle. **(1 mark)**

Question 3



(a) **i)** Measure and write down the size of angle *P*.
ii) Write down the mathematical name for angle *P*. **(2 marks)**

(b) **i)** Measure and write down the size of angle *Q*.
ii) Write down the mathematical name for angle *Q*. **(2 marks)**

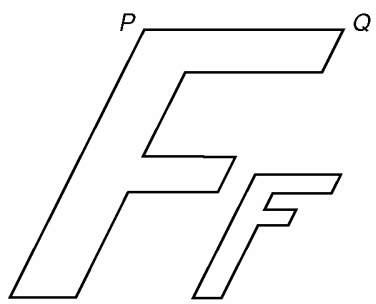
(c) Measure and write down the length of the line *RS*. **(1 mark)**

(d) Mark, with an X, the point on *PQ* that is 2.4 cm from *P*. **(1 mark)**

(e) Write down the mathematical name given to the four sided shape *PQRS*. **(1 mark)**

Question 4

PQ is a horizontal line.



On the diagram above mark

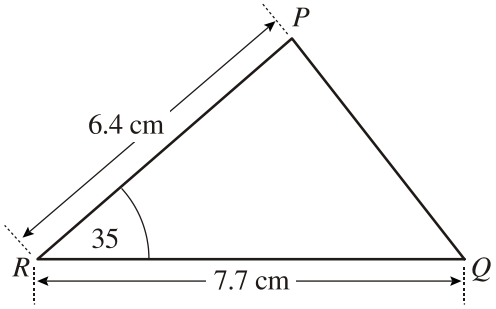
(a) a different horizontal line with a letter H

(b) an acute angle with a letter A

(c) an obtuse angle with a letter O.

Question 5

Here is a sketch of a triangle.
Diagram **NOT** accurately drawn



$PR = 6.4$ cm
$QR = 7.7$ cm
Angle $R = 35°$

(a) In the space below make an accurate drawing of the triangle. **(4 marks)**
(b) Measure the size of angle Q on your accurate drawing. **(1 mark)**

Question 6

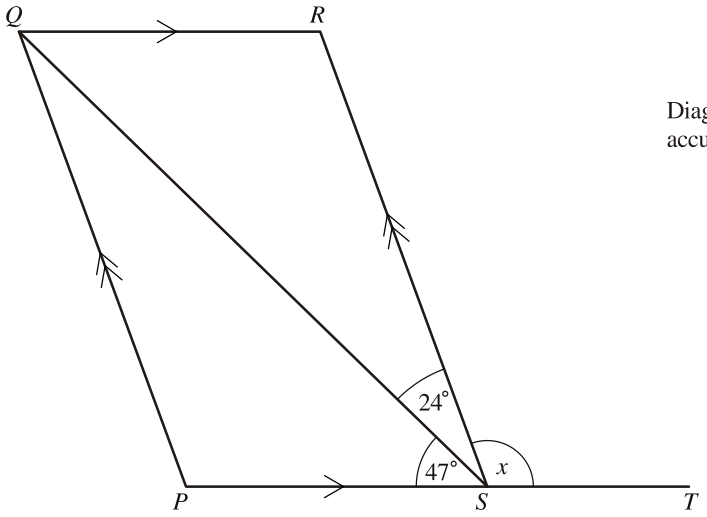


Diagram **NOT** accurately drawn.

PQRS is a parallelogram.

angle *QSP* = 47°
angle *QSR* = 24°
PST is a straight line.

(a) (i) Find the size of the angle marked *x*.

x = ... °

(ii) Give a reason for your answer. **(2 marks)**

(b) (i) Work out the size of angle *PQS*.

Angle *PQS* = ... °

(ii) Give a reason for your answer. **(2 marks)**

Question 7

The diagram shows a regular hexagon.

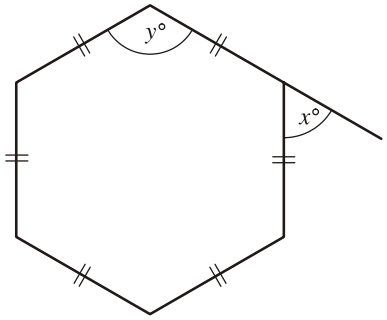


Diagram **NOT** accurately drawn.

(a) Work out the value of x. **(2 marks)**

(b) Work out the value of y. **(1 mark)**

Question 8

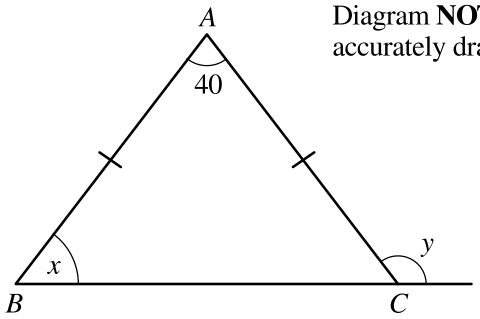


Diagram **NOT** accurately drawn

$AB = AC$

(a) Write down the special name that is given to this type of triangle **(1 mark)**

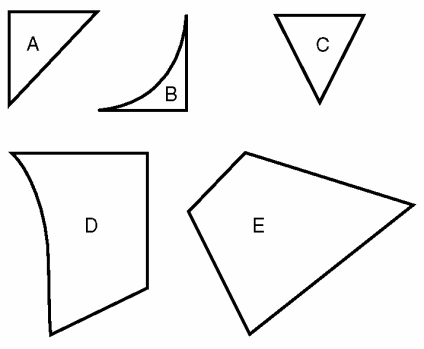
(b) Work out the size of the angles marked

i) x

ii) y **(3 marks)**

Question 9

Here are five shapes.

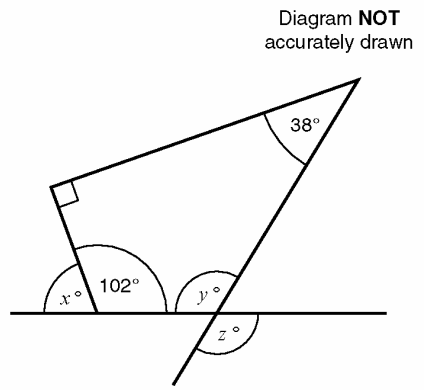


(a) Write down the letters of the shapes that have a right angle.

(b) In which way are shapes B and D different from shapes A, C and E?

Question 10

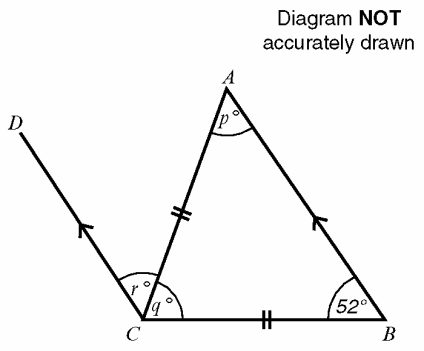
(a) i) Work out the value of x in the diagram below.
ii) Give a reason for your answer.



(b) i) Work out the value of y.
ii) Give a reason for your answer.

(c) i) Work out the value of z.
ii) Give a reason for your answer.

Question 11



$AC = BC$
AB is parallel to DC
Angle $ABC = 52^{\circ}$

(a) Work out the value of
i) p
ii) q

The angles marked p° and r° are equal.

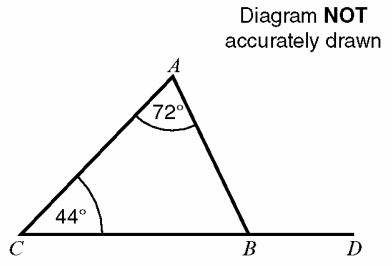
(b) What geometrical name is given to this type of equal angles?

Question 12

In the diagram below, work out the size of:

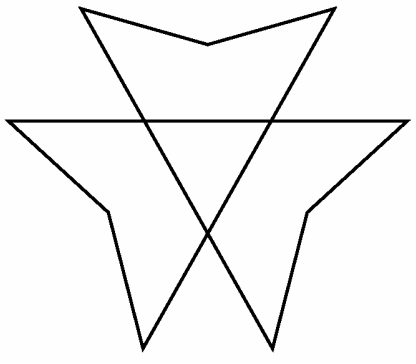
i) angle ABC

ii) angle ABD



Question 13

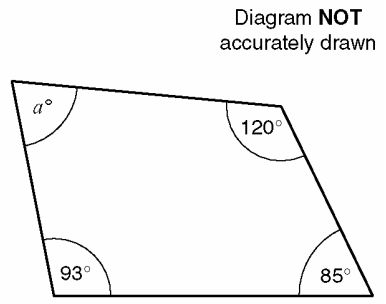
(a) Write down the order of rotational symmetry of the shape.



(b) On the diagram mark and label
- **i)** an acute angle with a letter **A**,
- **ii)** a reflex angle with a letter **B**,
- **iii)** an obtuse angle with a letter **C.**

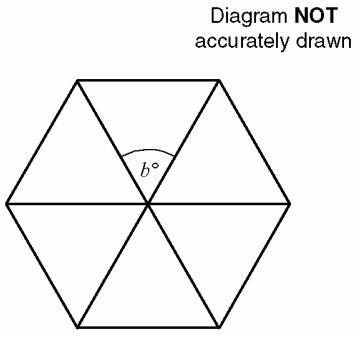
Question 14

(a) The diagram below shows a quadrilateral



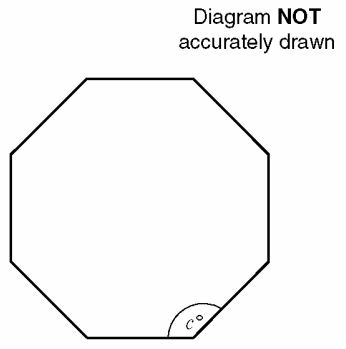
Work out the size of the angle marked aº.

(b) The diagram shows a regular hexagon.



Work out the size of the angle marked bº.

(c) The diagram shows a regular octagon.



Work out the size of the angle marked cº.

Question 15

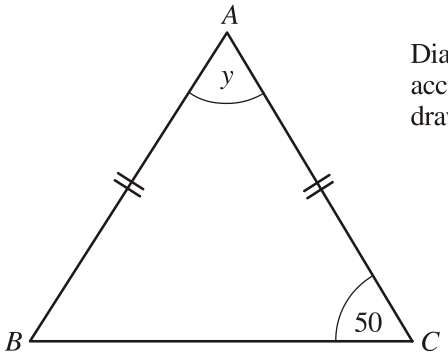


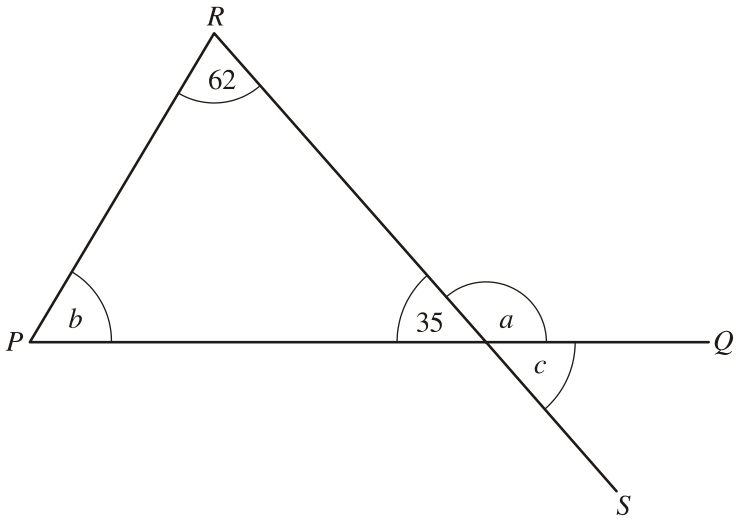
Diagram **NOT** accurately drawn

In triangle ABC, $AB = AC$ and angle $C = 50°$.

(a) Write down the special name for triangle ABC. **(1 mark)**

(b) Work out the value of y. **(2 marks)**

Question 16



In the diagram PQ and RS are straight lines.

(a) i) Work out the value of a.
ii) Give a reason for your answer.

(b) i) Work out the value of b.
ii) Give a reason for your answer.

(c) i) Work out the value of c.
ii) Give a reason for your answer.

Question 17

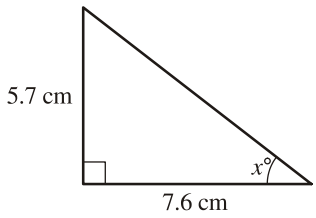


Diagram **NOT** accurately drawn.

The diagram shows a sketch of a triangle.

(a) Make an accurate drawing of the triangle. **(2 marks)**

(b) **(i)** On your drawing, measure the size of the angle marked $x°$.

..... °

(ii) Write down the special mathematical name of the angle marked $x°$.

(2 marks)

(c) Work out the area of the triangle.
State the units of your answer. **(3 marks)**

Question 18

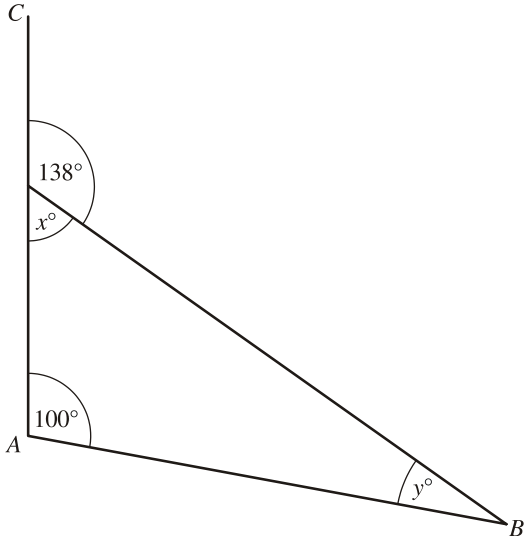


Diagram **NOT** accurately drawn.

AC is a straight line.

(a) **(i)** Work out the size of the angle marked $x°$.
(ii) Give a reason for your answer.

..... °
(2 marks)

(b) **(i)** Work out the size of the angle marked $y°$.
(ii) Give a reason for your answer.

..... °
(2 marks)

Question 19

Here is a sketch of a triangle.

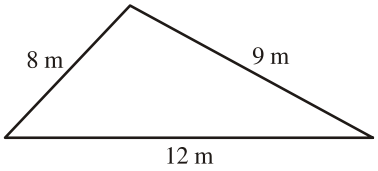


Diagram **NOT** accurately drawn.

The lengths of the sides of the triangle are 8 m, 9 m and 12 m.

Use a scale of 1 cm to 2 m to make an accurate scale drawing of the triangle.

(3 marks)