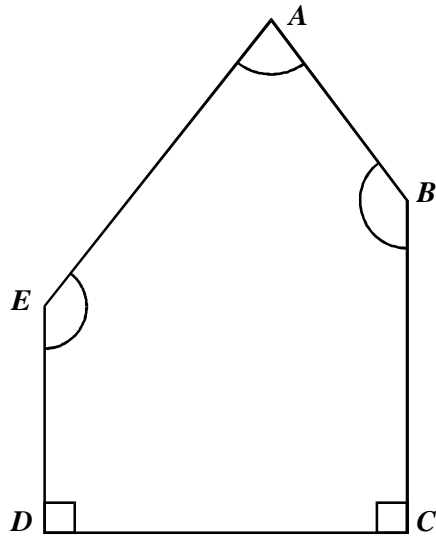


1. The diagram shows a pentagon $ABCDE$.



- (a) Write down two lines that are parallel.

.....
.....

(1)

- (b) Write down the line that is perpendicular to BC .

.....

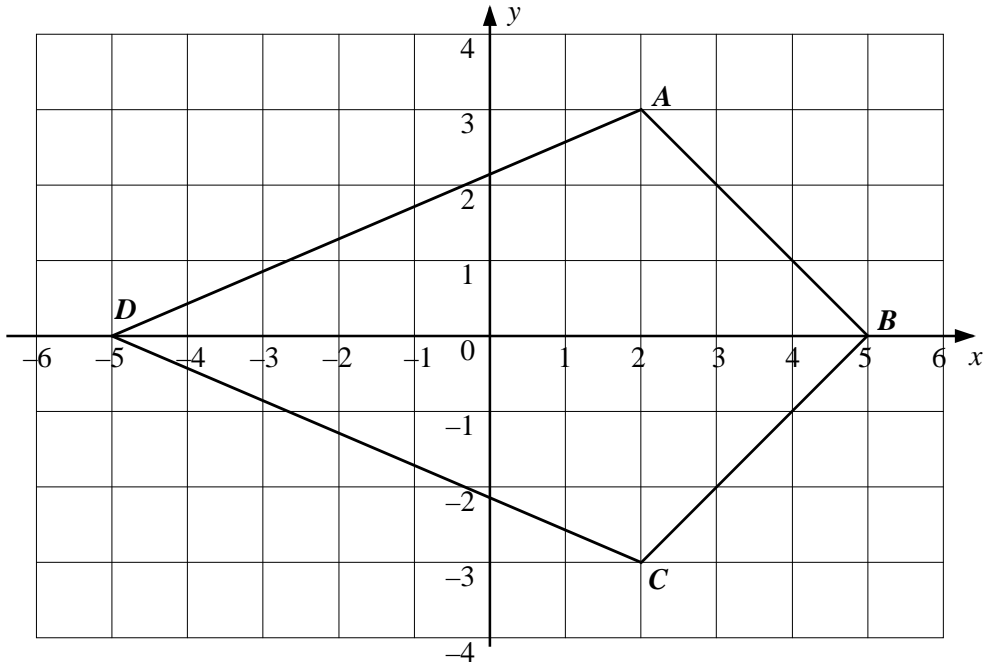
(1)

- (c) Which **two** angles are obtuse angles?

.....
.....

(1)

2. The diagram shows a quadrilateral $ABCD$



(a) Write down the coordinates of

(i) Point A

.....

(1)

(ii) Point C

.....

(1)

(iii) Point D

.....

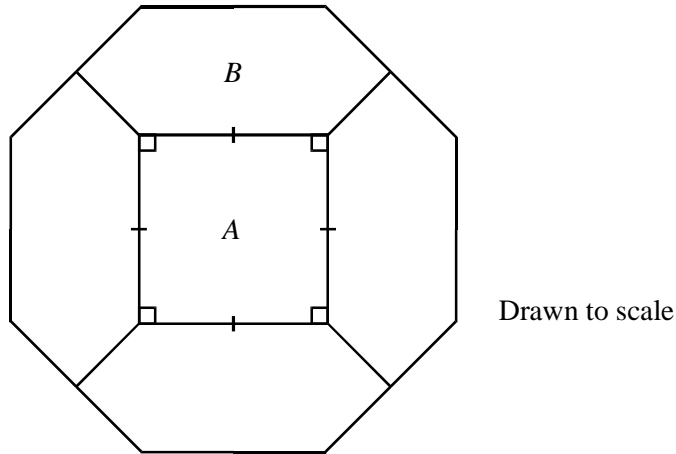
(1)

(b) What special name is given to quadrilateral $ABCD$?

.....

(1)

3. A floor in Windsor Castle is covered with 5 large tiles as shown.



(a) What shape is

(i) Tile *A*?

.....

(1)

(ii) Tile *B*?

.....

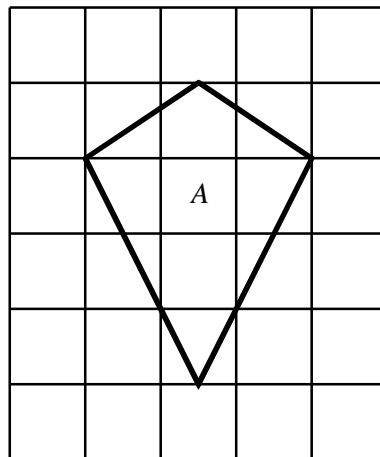
(1)

(b) What is the shape of the floor?

.....

(1)

4. The diagram shows kite *A* drawn on a centimetre square grid.



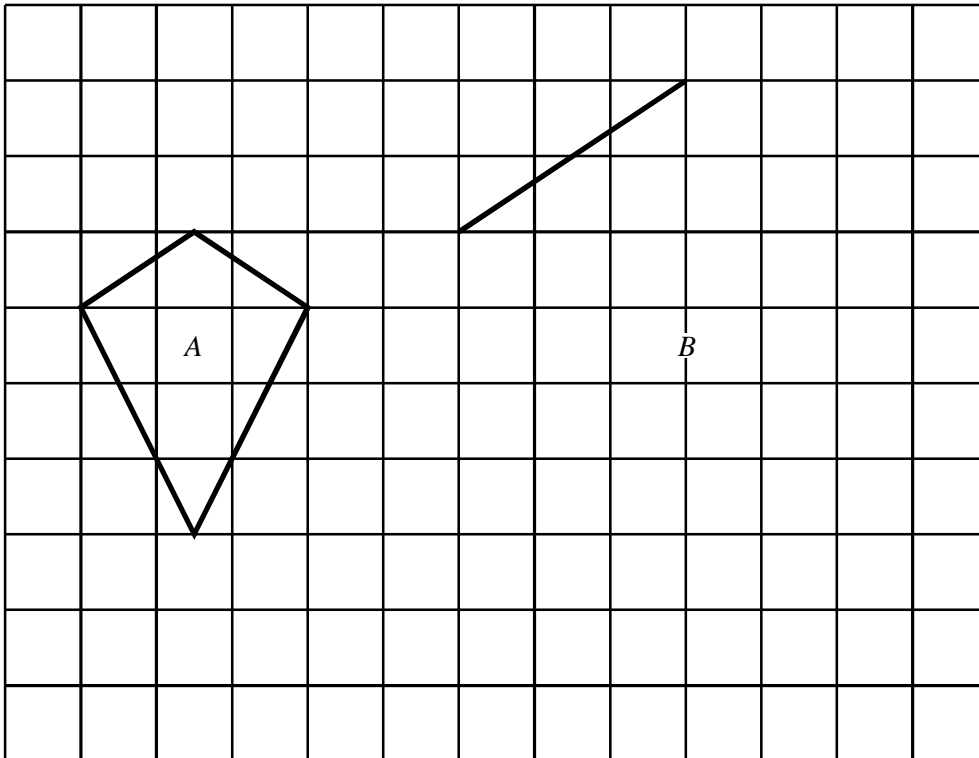
(a) Work out the area of kite *A*.

.....
.....

(2)

(b) This diagram shows kite *A* and one side of kite *B*.
Kite *B* is an enlargement of kite *A*.

(i) Complete the diagram for kite *B*.



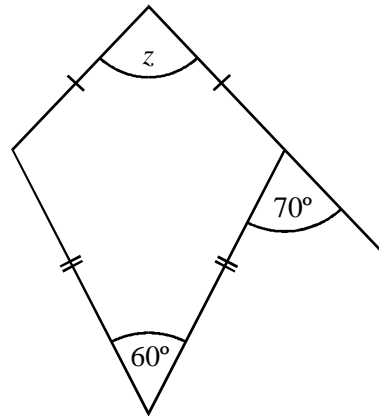
(1)

(ii) What is the scale factor of the enlargement?

.....

(1)

(c) The diagram shows a different kite.



Not drawn accurately

Calculate the size of the angle marked z .

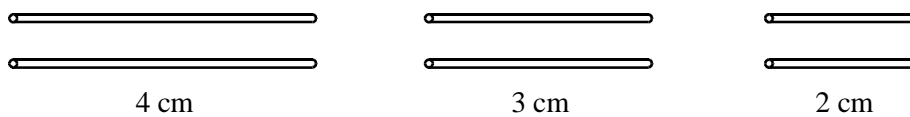
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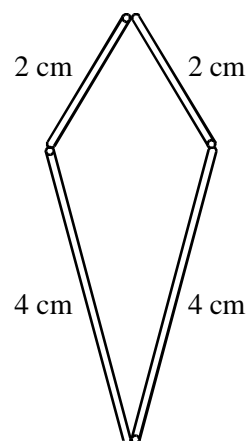
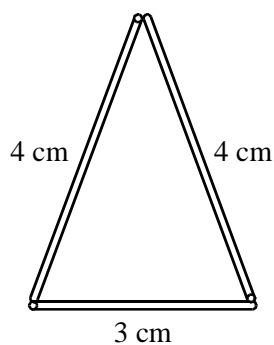
.....

(3)

5. A pupil has six straws.
Two straws are 4 cm long, two are 3 cm long and two are 2 cm long.



(a) Here are two shapes made using some of the straws.
Write down the special name for each shape.



.....

.....

(2)

- (b) Draw a sketch to show how a parallelogram could be made using some of these straws. Mark the lengths of the straws on your sketch.

(1)

6. A quadrilateral with 4 equal sides and 4 right angles is called a square.

What is the mathematical name given to:

- (a) A quadrilateral with 4 equal sides but no right angles?

.....

(1)

- (b) A quadrilateral with 2 pairs of opposite sides equal but diagonals of different lengths?

.....

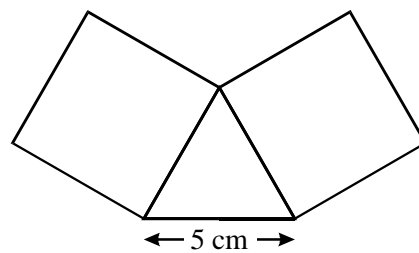
(1)

- (c) A quadrilateral with only 1 pair of parallel sides of unequal lengths?

.....

(1)

7. A shape is made up of two squares and an equilateral triangle as shown.



Rebecca says,

The area of the shape is greater than 50cm^2 and less than 75cm^2

Is she correct?
Explain your answer.

.....

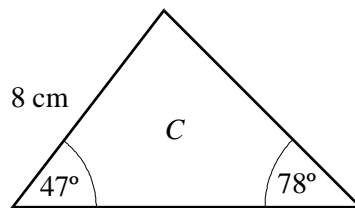
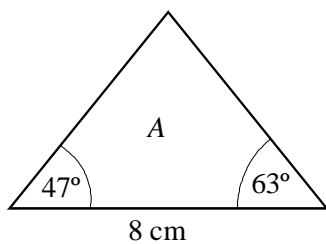
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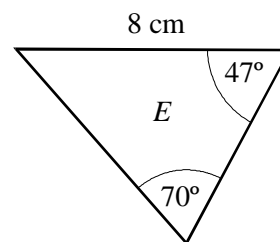
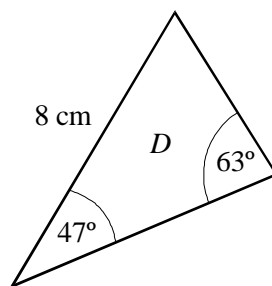
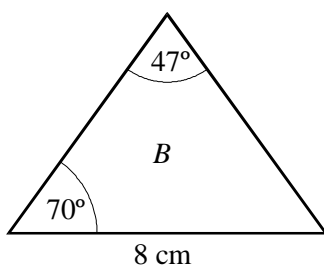
.....

(3)

8. A teacher sketches five triangles.



Not drawn
to scale



Which two of these
triangles are congruent?
Give a reason for your
answer.

.....

.....

.....

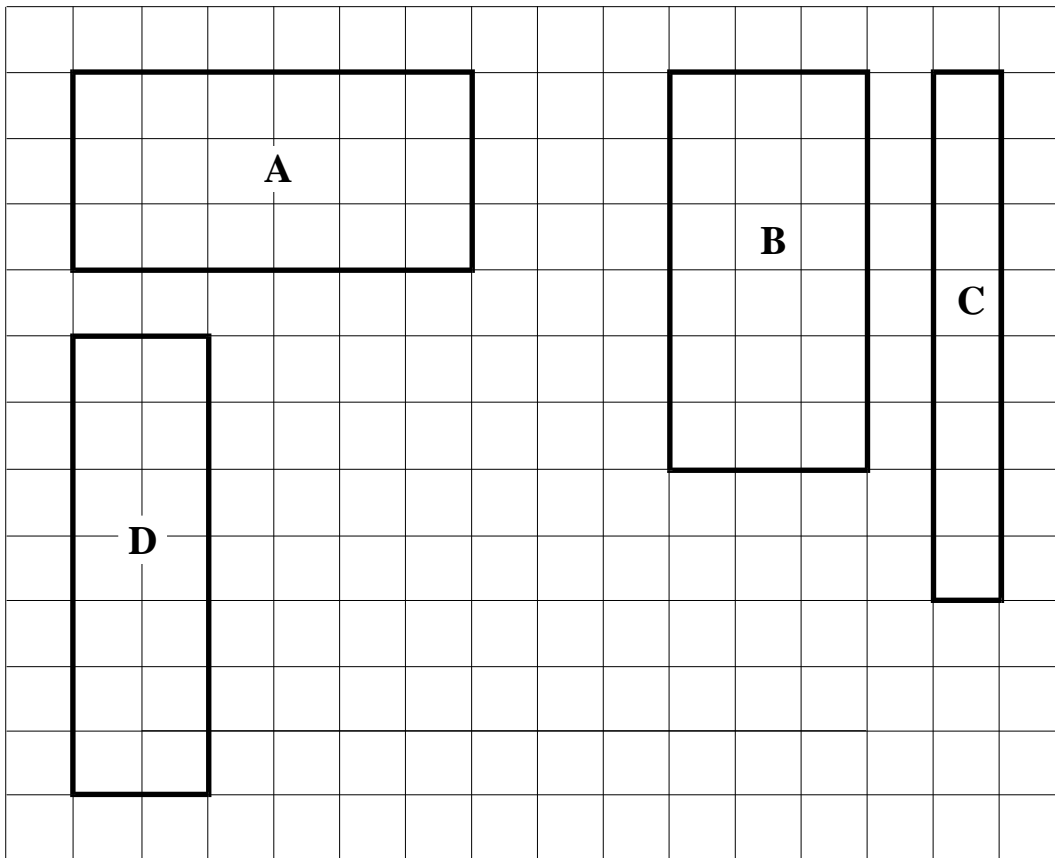
.....

(2)

Total 2 marks

9. Terry is told to draw four different rectangles, each with a perimeter of 18 cm.

He draws these shapes.



(a) His teacher says two of these are really the same.
Which two?

.....

(1)

(b) What is the mathematical name given to two shapes which are exactly the same?

.....

(1)

(c) On the grid draw another rectangle with a perimeter of 18 cm which is not exactly the same as *A*, *B*, *C* or *D*.

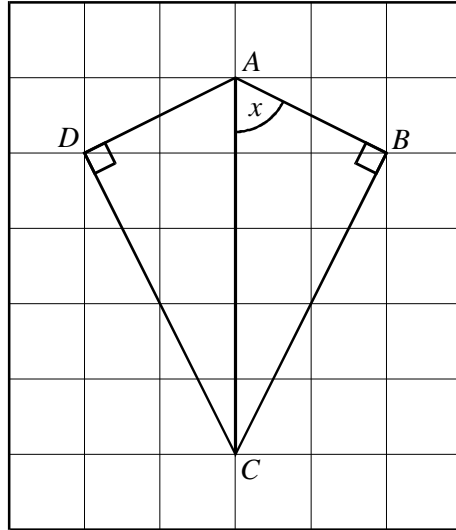
(1)

(d) What is the area of rectangle *D*?

.....

(1)

10. Two right angled triangles are put together on a 1 cm grid to make a kite.



- (a) What type of angle is the angle marked x ?

.....

(1)

- (b) What is the area of the kite?
Remember to state the units.

.....

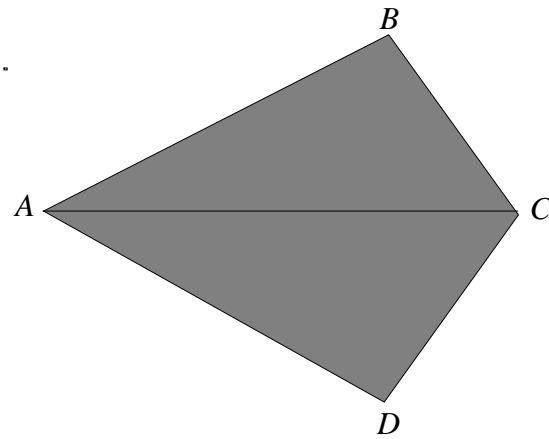
(2)

- (c) Draw a sketch to show how the two triangles can be put together to make an isosceles triangle.

(2)

Total 5 marks

11. Triangle ABC is reflected in the line AC .
The reflection is another triangle, ADC .



- (a) (i) Triangles ABC and ADC are congruent.
Explain what this means.

.....
.....

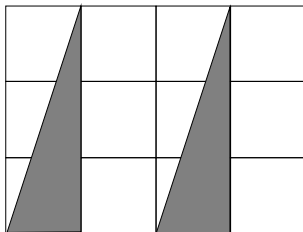
(1)

- (ii) What is the special name for the quadrilateral $ABCD$?

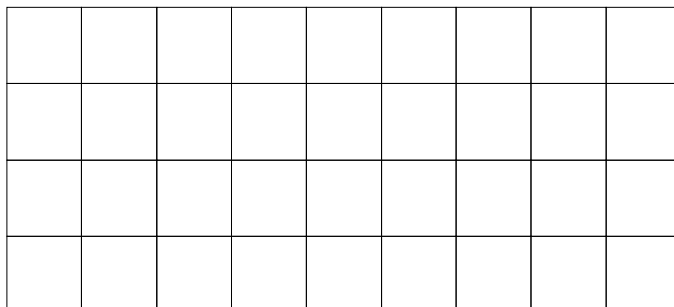
.....

(1)

- (b) Two more triangles are drawn below.

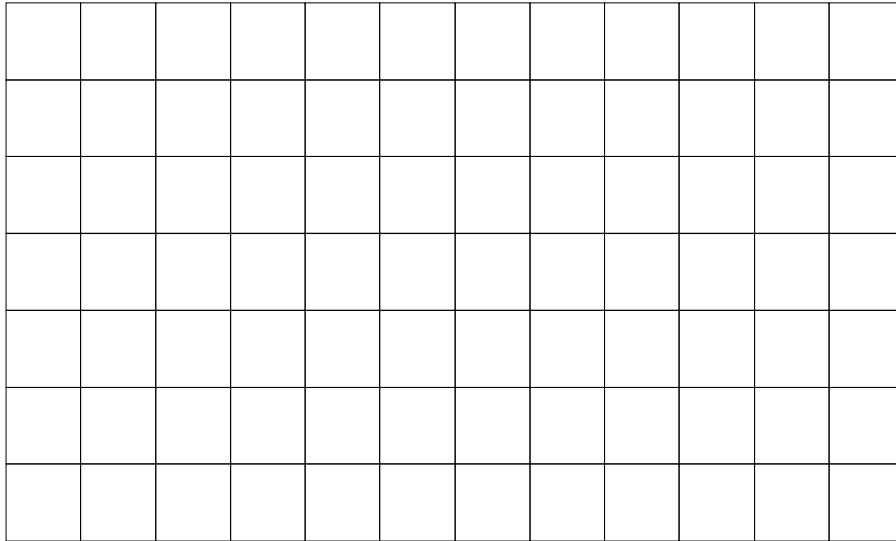


- (i) These two triangles are placed together to make a triangle.
On the grid below, show how this is done.



(1)

(b) (ii) Show how the two triangles can be placed together to make a parallelogram.



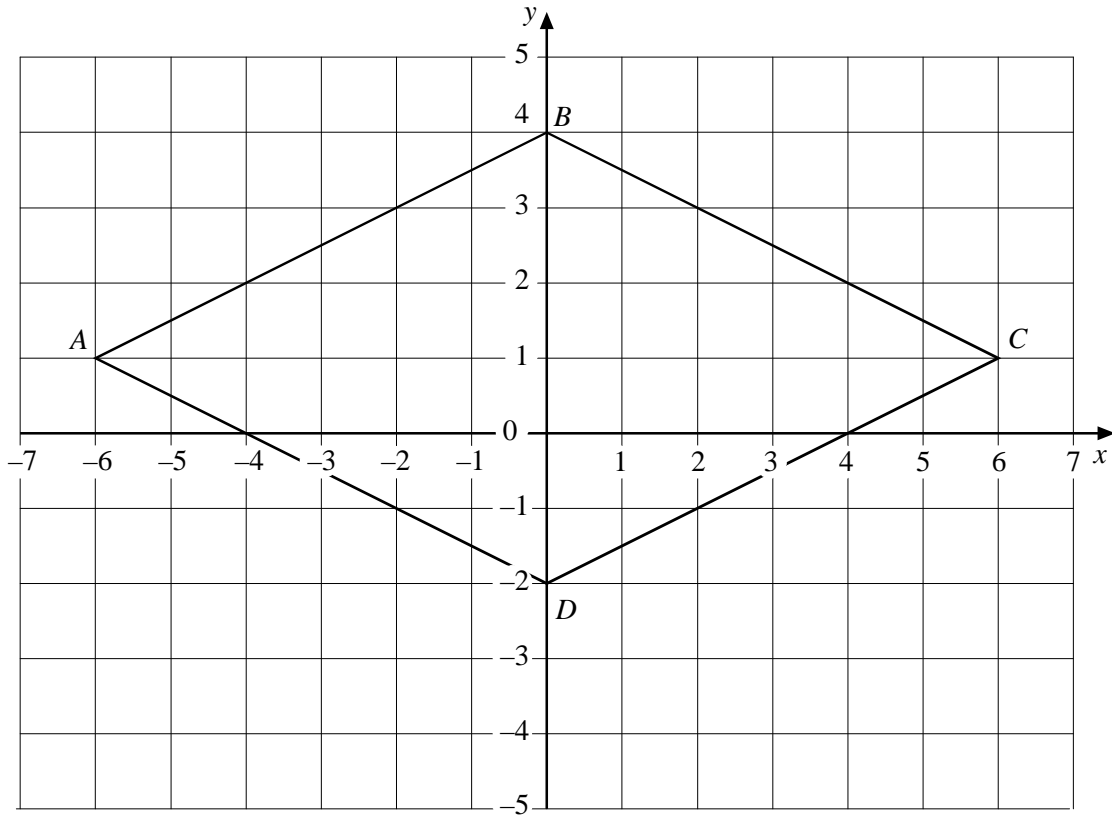
(1)

(iii) How many lines of symmetry does your parallelogram have?

.....

(1)

12.



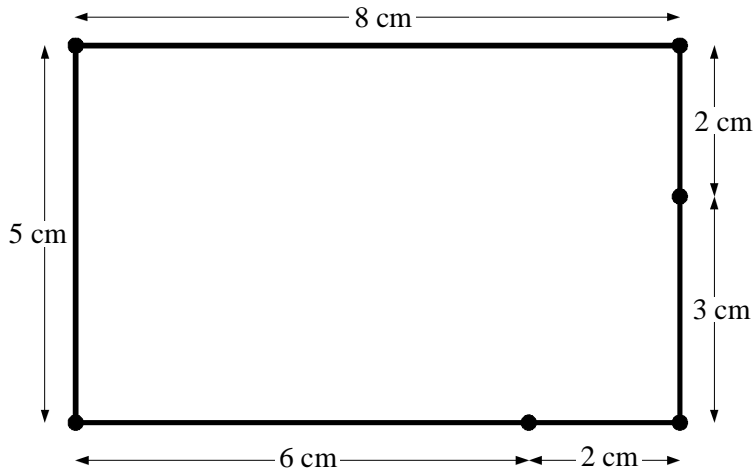
- (a) Write down the coordinates of
- (i) point C, (1)
 - (ii) point A, (1)
 - (iii) point D. (1)
- (b) What special name is given to triangle ABC?
..... (1)
- (c) What special name is given to quadrilateral ABCD?
..... (1)
- (d) What is the order of rotational symmetry for shape ABCD?
..... (1)

Total 6 marks

13. Leah has 6 rods.
Their lengths are

8 cm, 6 cm, 5 cm, 3 cm, 2 cm, 2 cm.

They can be joined together as shown.



- (a) What is the perimeter of the rectangle?

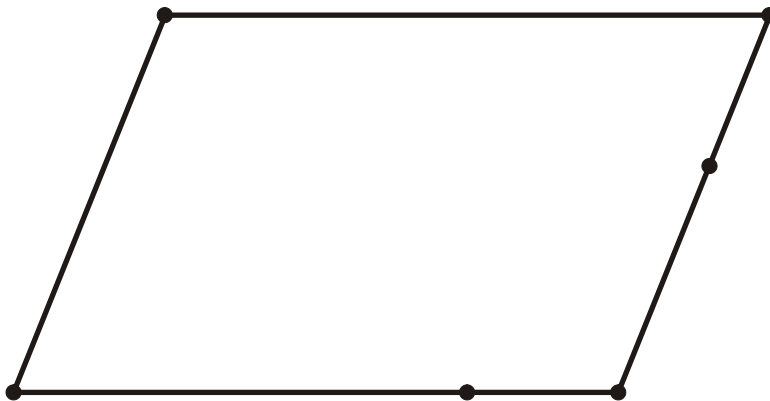
.....
.....

(1)

- (b) (i) The rectangle is changed into the shape below.
What is the name of this shape?

.....

(1)



- (ii) Comment on the length of its perimeter.

.....
.....

(1)

(c) How many lines of symmetry has an isosceles triangle?

.....

(1)

(d) Leah uses only **three** of her rods to form an isosceles triangle.
Which rods does she use?

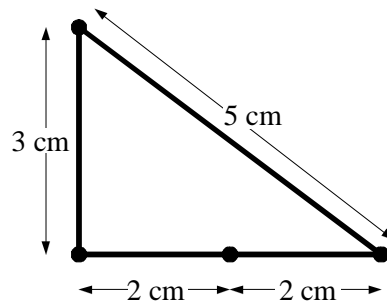
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.....

.....

(2)

(e) A right-angled triangle can be formed using four of the rods.



What is the area of this triangle?

.....

.....

.....

(2)