

SMILE WORKCARDS

Area and Perimeter Pack One

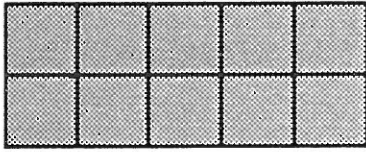
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1	Which has the Largest Area? w/s	2230
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Which has the largest area?

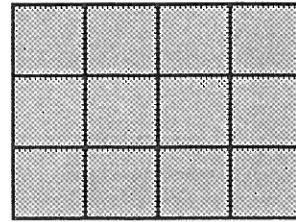
1. Which has the largest area?

a)



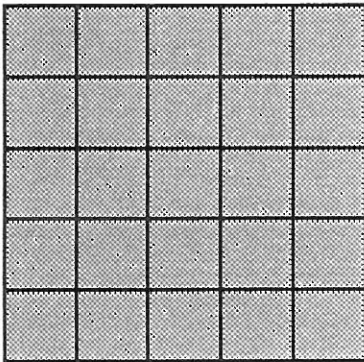
or

b)



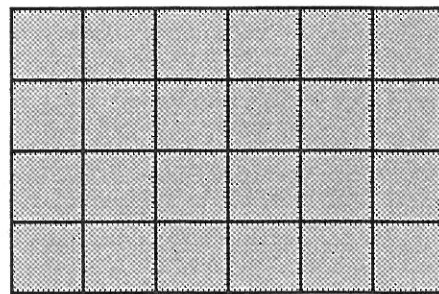
2. Which has the largest area?

a)



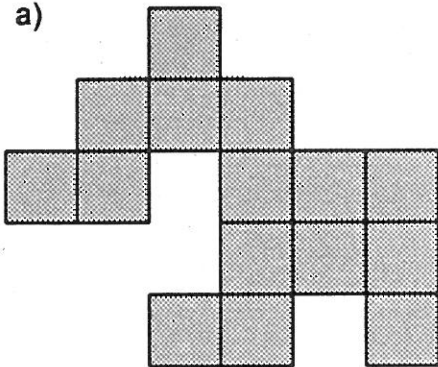
or

b)



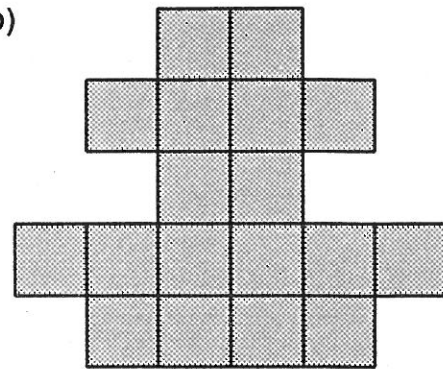
3. Which has the largest area?

a)



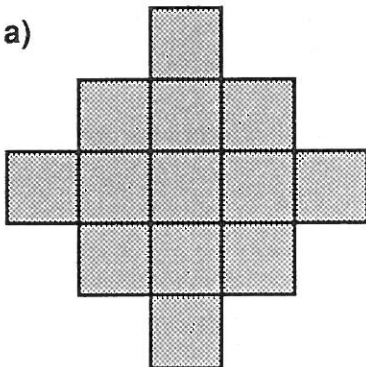
or

b)



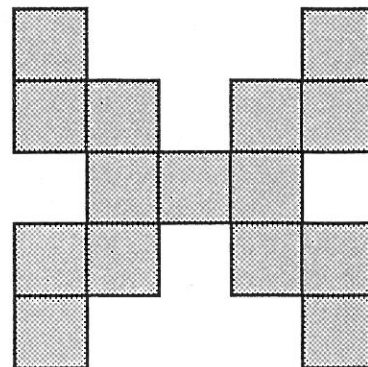
4. Which has the largest area?

a)



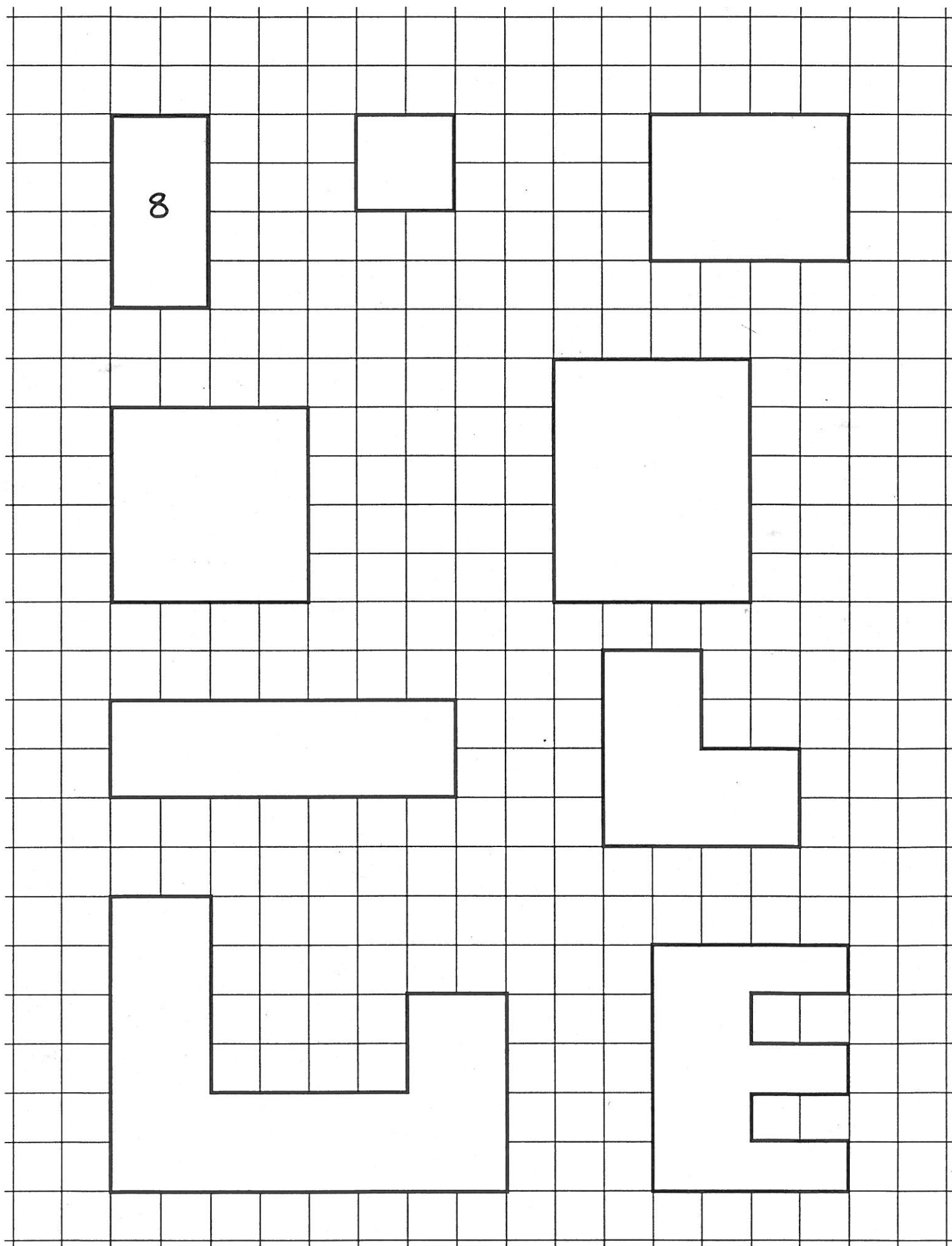
or

b)



5. Draw two shapes with different areas and ask someone else to work out which has the largest area.

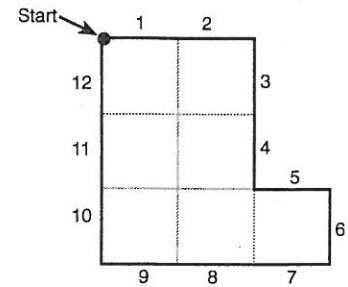
How many centimetre squares ?



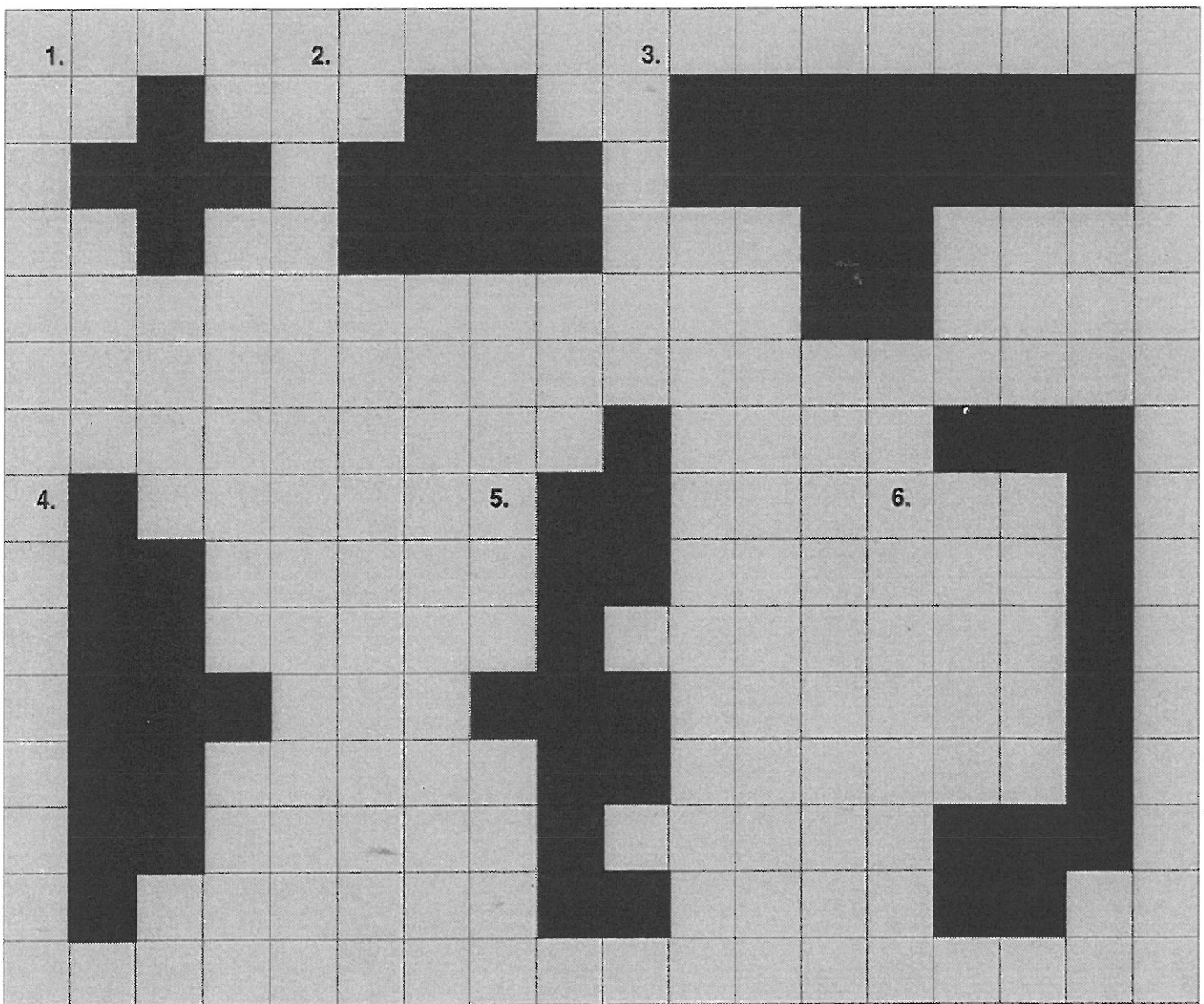
What is the perimeter of this 'L' shape?

The **perimeter** is the distance around the edge of a shape.

The perimeter of this 'L' shape is 12cm.



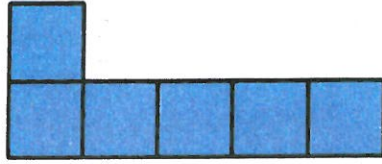
- Copy these shapes on to cm^2 paper.
- What is the perimeter of each shape?



7. Draw two more shapes of your own.
What is the perimeter of each shape?
8. Draw two different shapes with a perimeter of 12cm.

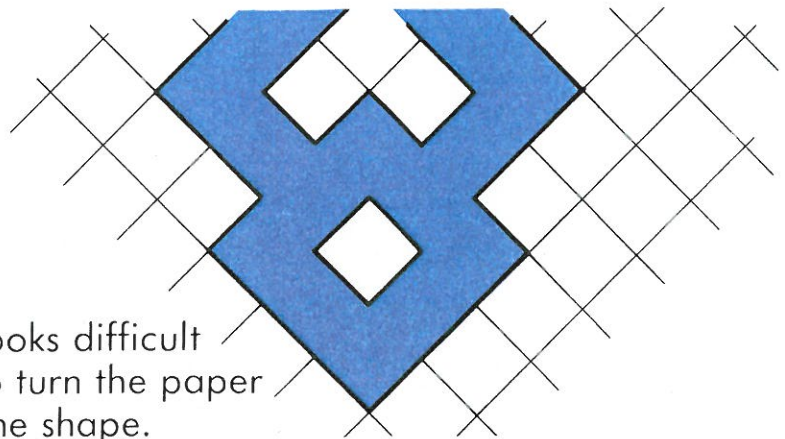
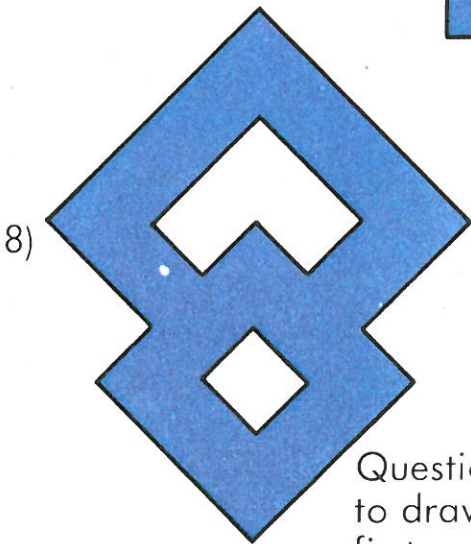
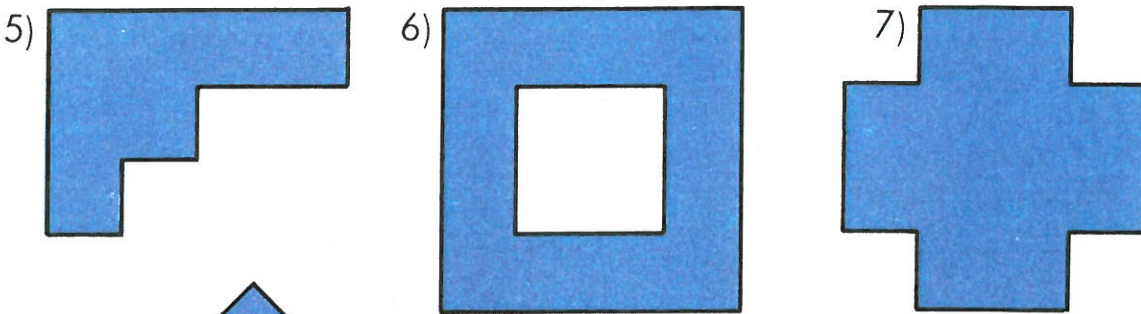
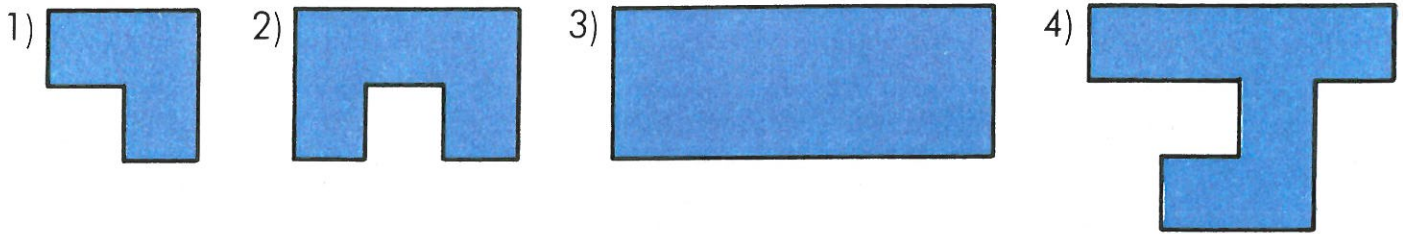
Area 1

The area of this shape is
6 sq cm or 6 cm²

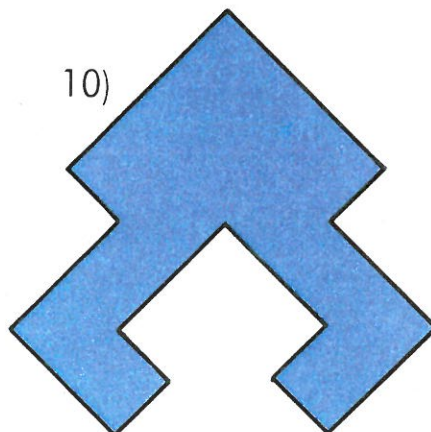
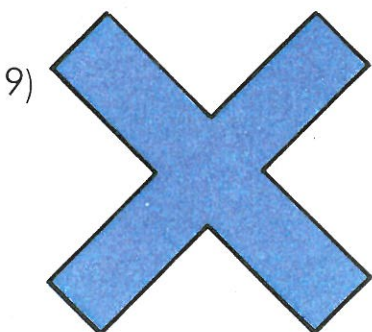


(Read this 'six square centimetres'.)

Draw each shape below, on cm squared paper and write the area.

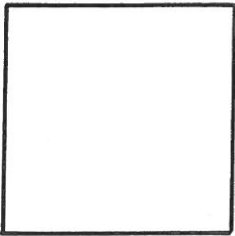


Question (8) looks difficult to draw . . . so turn the paper first or trace the shape.

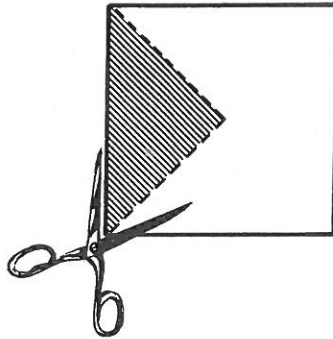


Area 3

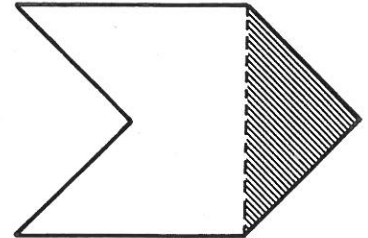
Start with
a square ...



... cut it along
the dotted line ...

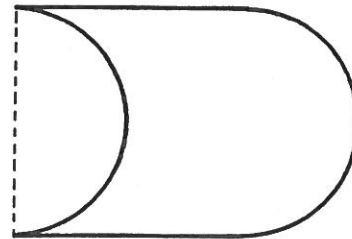
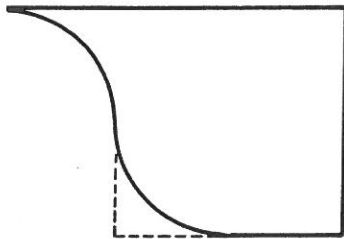
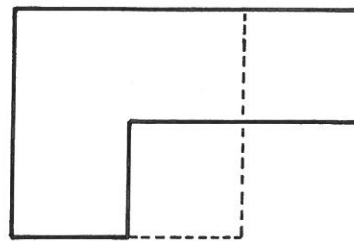
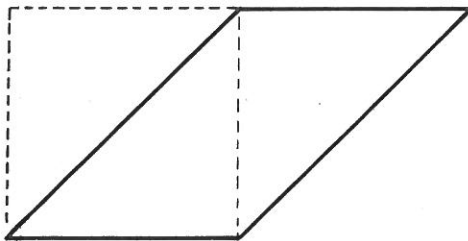


... change the square
into this shape.



The area of the shapes is the same
because nothing has been taken away or added.

1. Cut out 6 squares, all the same area.
2. Make these shapes using 4 of them.
Stick them into your book.



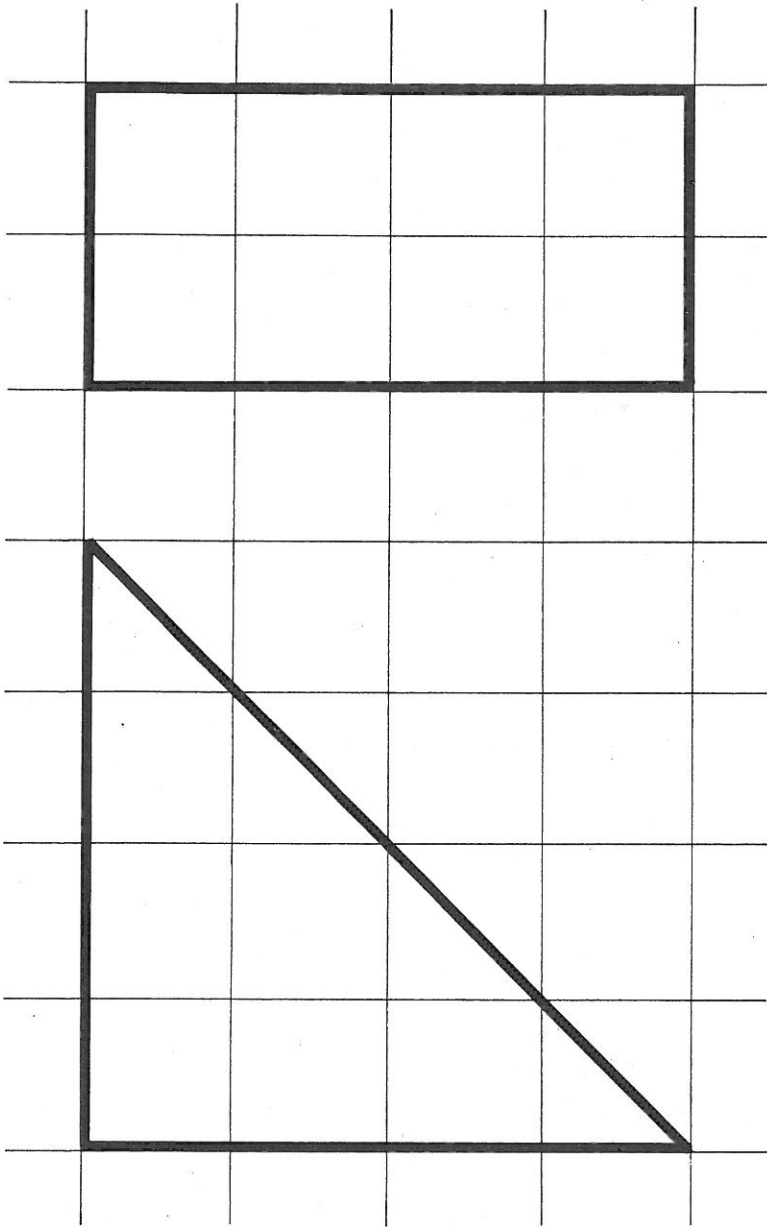
3. Make up your own shapes with the last 2 squares
and put them in your book.
4. Why are the areas of the shapes all the same?

Eight Squares

Cut out 6 squares and 4 half squares.

How many different shapes can you make with area 8 squares?

Draw your answers on the squared paper.



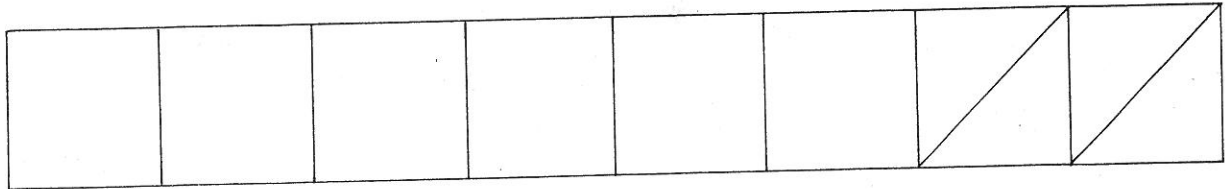
→ 8 squares

→ 6 squares
4 half squares → 8 squares

Eight Squares Cut-Out Sheet

Smile 1628A

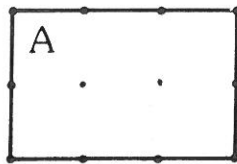
Cut out the 6 squares and 4 triangles.



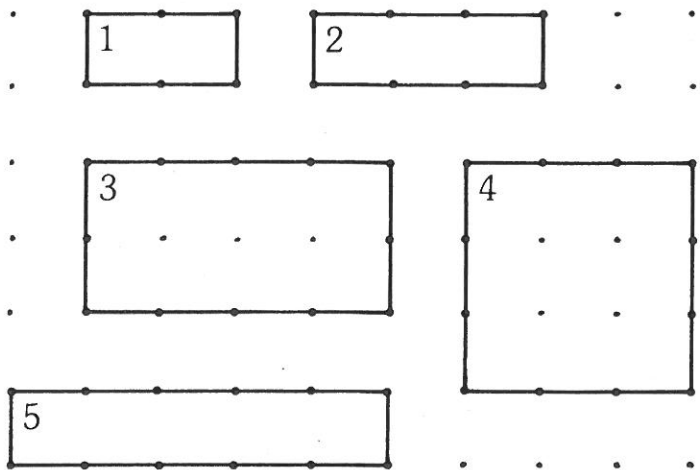
Rectangles Worksheet

Smile 0178

	length cm	width cm	area cm ²
A	3	2	6
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



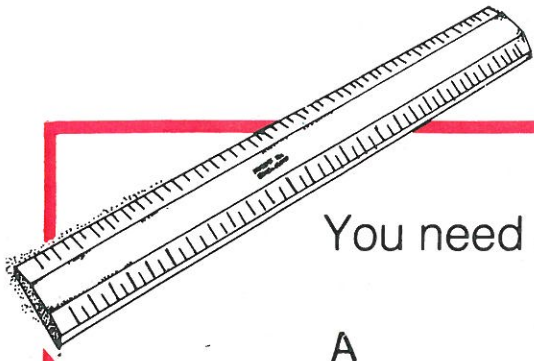
The first row of the table has been filled in for rectangle A. Fill in rows 1—5 for these rectangles:



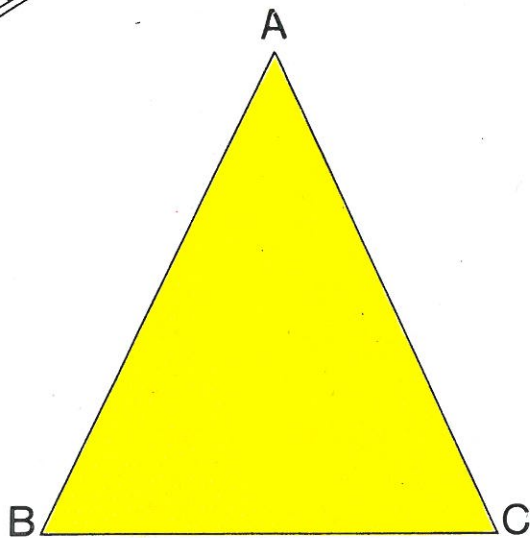
Use the space below to draw 5 more rectangles. Fill in rows 6 to 10 for your rectangles.



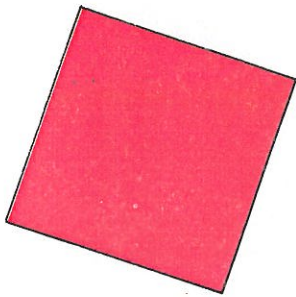
Can you see a way to check that the figures in the table are correct without looking at the rectangles?



You need a ruler.



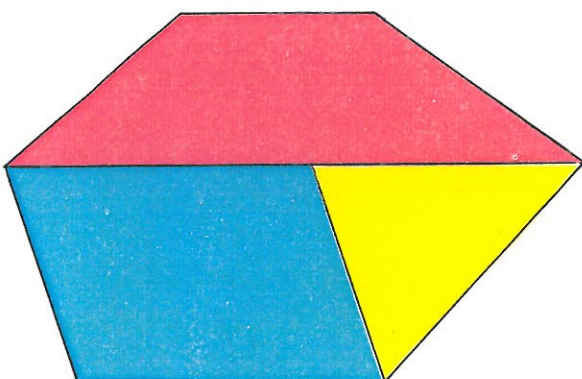
- 1) What shape is this?
- 2) How long is the side AB? Measure it in centimetres.
- 3) Measure BC.
- 4) Measure CA.
- 5) What is the perimeter of the triangle? (How far around is it?)



- 6) Measure the sides of the square. What is the perimeter of the square?



- 7) Do the same for:
 - a) the rectangle
 - b) the red trapezium
 - c) the blue parallelogram
 - d) the hexagon



Area 2

1) List the areas of these shapes:

A is 1cm^2

B is 

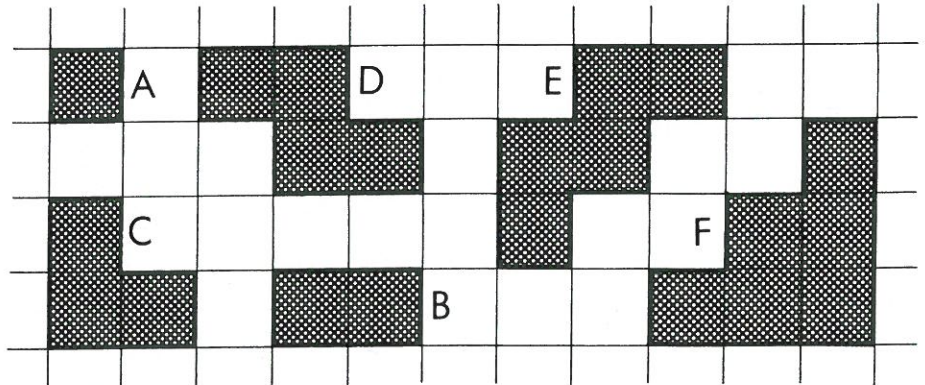
C is 

C is 

D is 

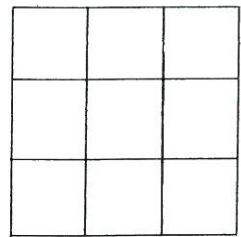
E is 

F is 

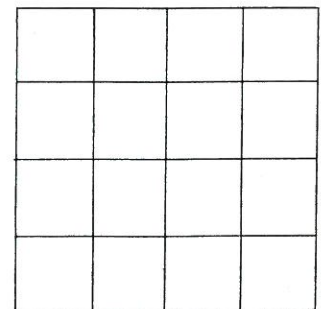


2) Draw the shapes and cut them out.

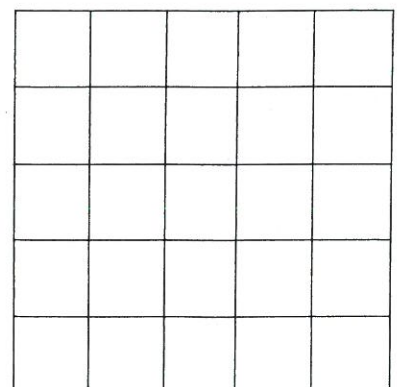
3) Use some of your shapes to fill the $3\text{cm} \times 3\text{cm}$ square and sketch your answer.
What is the area of the square?



4) Do the same for this $4\text{cm} \times 4\text{cm}$ square and write down the area.



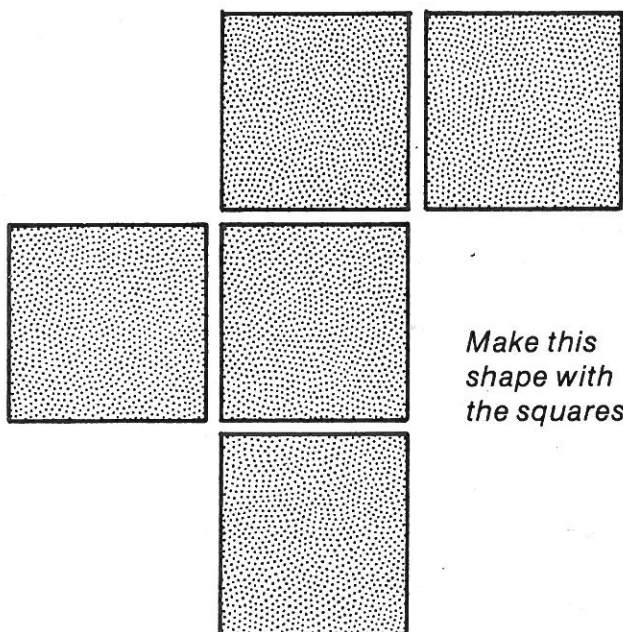
5) It is impossible to make a $5\text{cm} \times 5\text{cm}$ square using the pieces above. Why?



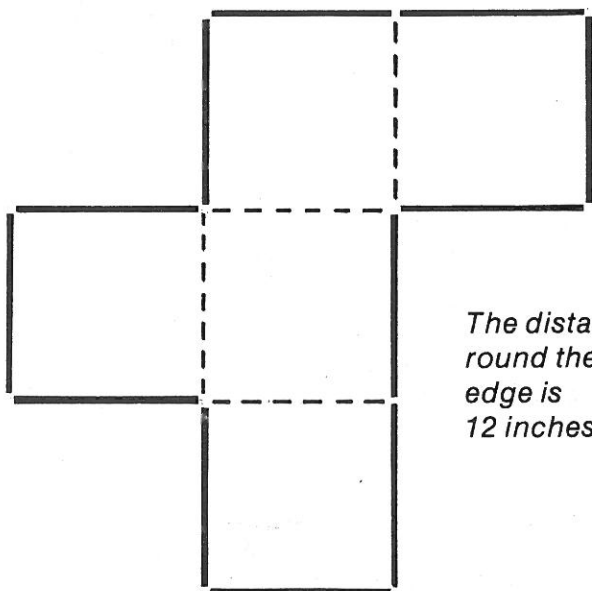
Keep your shapes – You will need them for the test

You will need square counters (1 inch square)

Twelve inch perimeter



Make this shape with the squares.



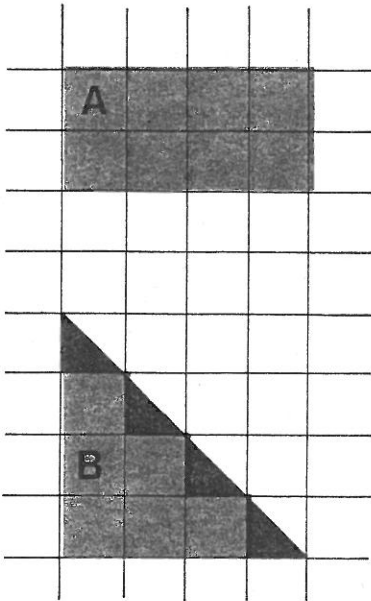
The distance round the edge is 12 inches.

Write: Perimeter = 12 ins

1. Find as many shapes as you can which have a perimeter of 12 inches. *Draw them in your book.*
2. Can you make a perimeter of 12 inches with:
 - 8 squares?
 - 6 squares?
3. What is the biggest number of squares you could use for perimeter 12 inches? What is the smallest number of squares you could use?



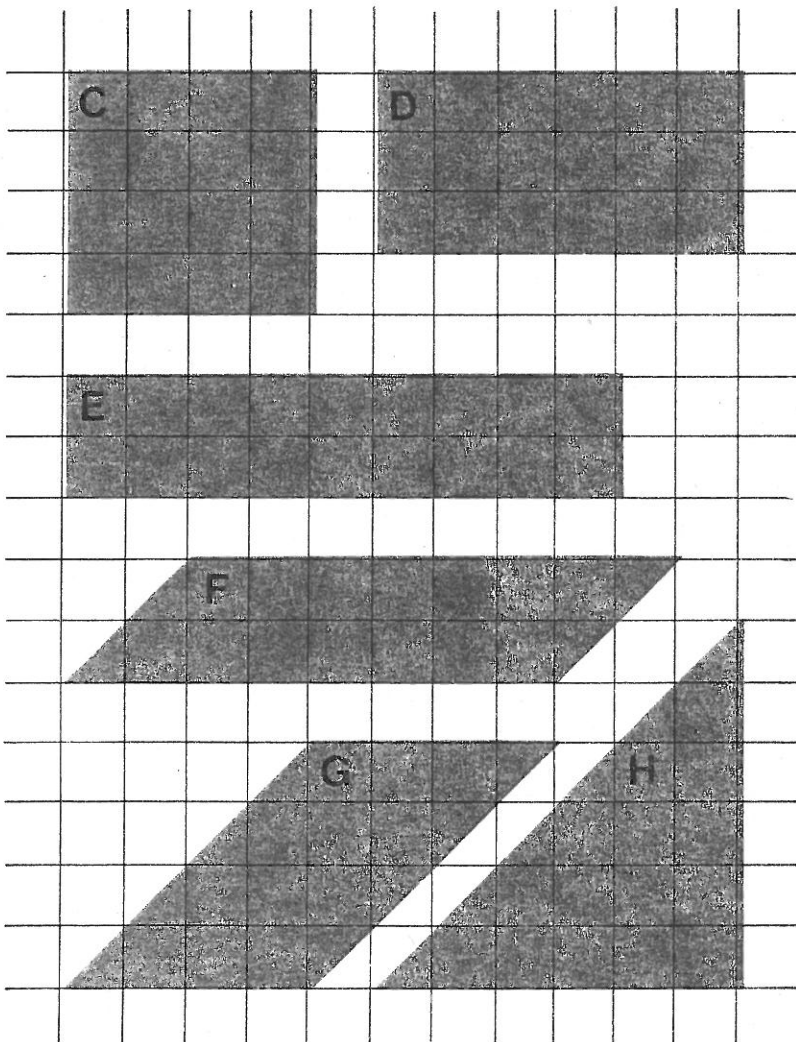
The Same Area



Rectangle A:
8 whole squares

Triangle B:
6 whole squares
4 half squares or 8 whole squares

Rectangle A and Triangle B have the **same area.**



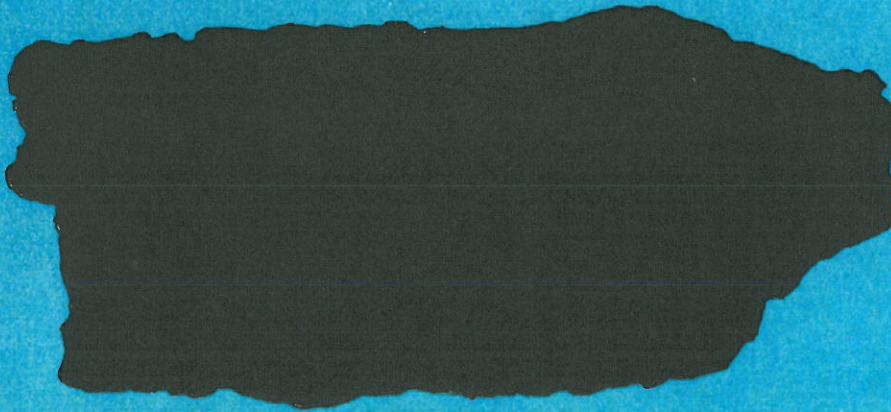
- 1) Copy these shapes onto squared paper.
- 2) Colour the whole squares **red**. Colour the half squares **blue**.
- 3) Which shapes have the same area ...
... count the whole squares and the half squares to find out.

Which is larger?

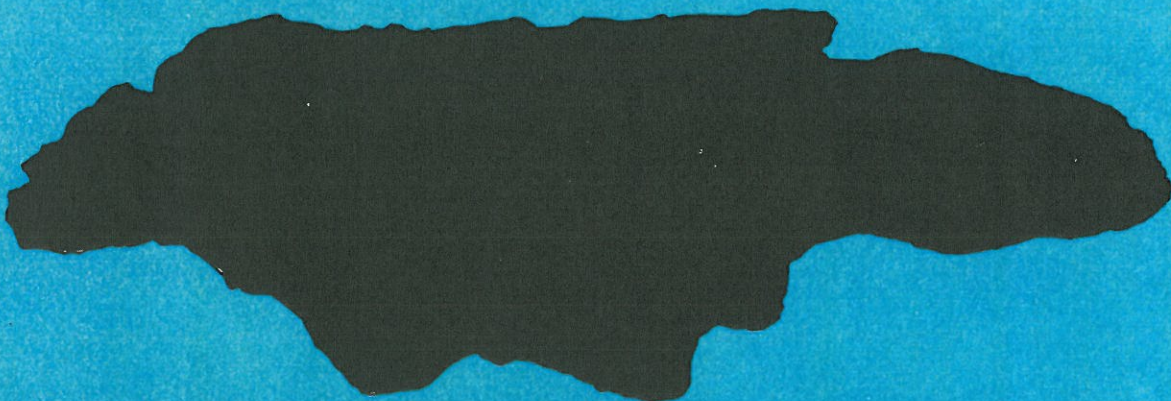
You will need: tracing paper, graph paper.

Look carefully at these two islands.

Puerto Rico



Jamaica



Guess which island has the bigger area.

Trace both shapes on to graph paper.

By counting the squares find the areas as accurately as you can.

Was your guess right?

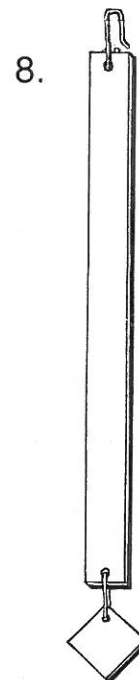
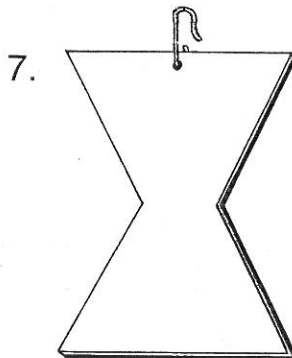
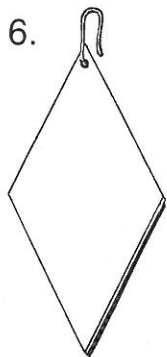
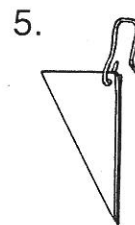
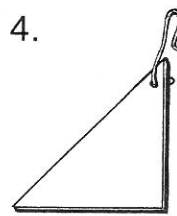
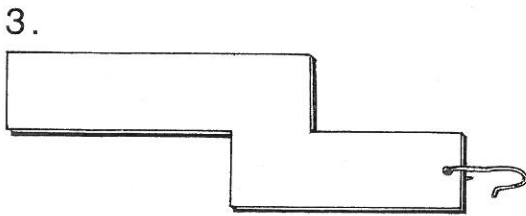
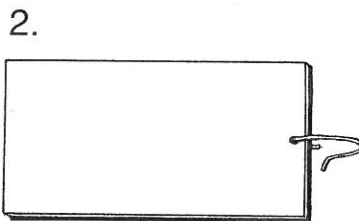
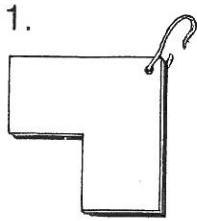
Set a puzzle like this for a friend.

Silver earrings

A large part of the cost of making silver jewellery is the metal itself.



If this square of sheet silver costs £1 how much would these cost?

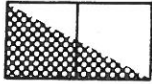


You may like to invent some more...
...give the cost of each one.

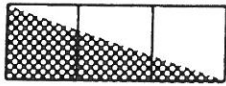
Area 4



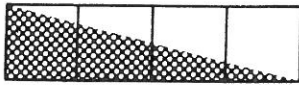
The shaded area is $\frac{1}{2} \text{ cm}^2$



The shaded area is half of two squares — which is 1 cm^2

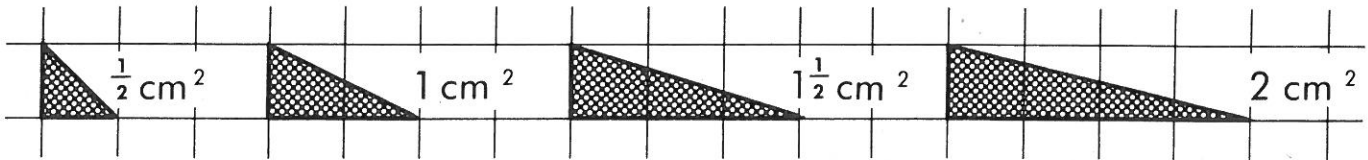


The shaded area is half of three squares.
How much is this?

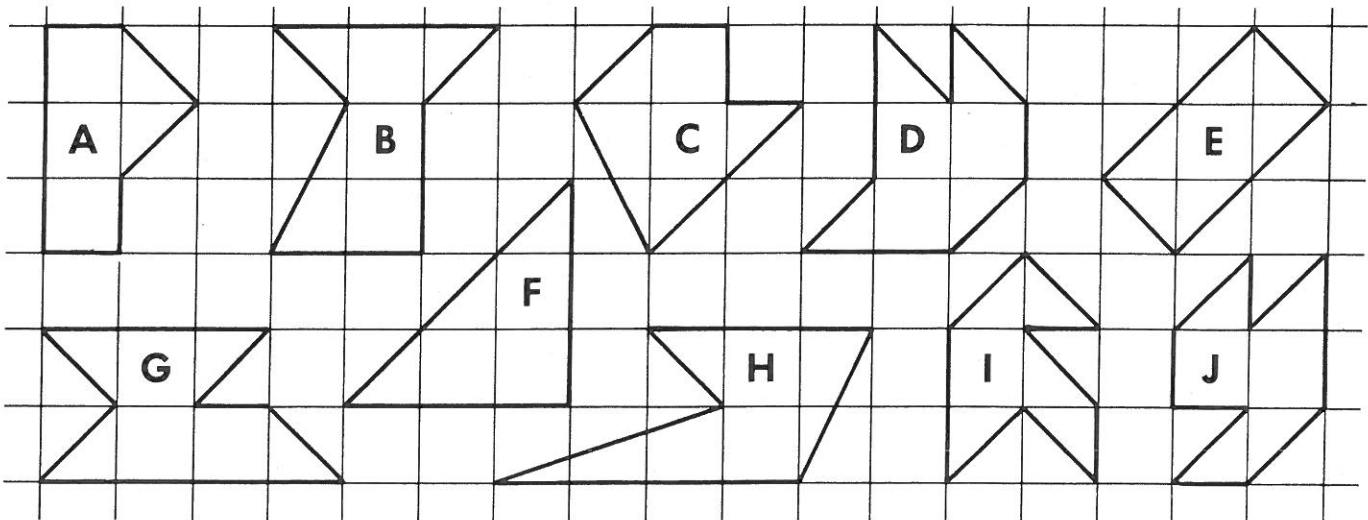


What area is shaded?

Turn over



Draw these shapes:



- (1) Find the area of each shape.
- (2) Draw as many shapes as you can, each with an area of 5 cm^2 .
It will help to make them on a pinboard first.