

Area of your left foot

Do the same type of exercise as on blackline master 77 to find the area of the sole of your foot.

Complete:

1. Number of whole 1 cm² squares =
2. Number of $\frac{1}{2}$ cm² or more squares =

Do boys have larger feet?

3. Add

Total _____ cm²

A large grid of 16 columns and 20 rows, intended for students to trace the outline of their left foot onto it. The grid is empty and ready for use.

The aim of this game is for each person in your team to end up with 3 shapes that together form a square. Each person will make a square with the same area.

1. Record the time when your team started (see the table below).
2. Take the shapes from your envelope and place them on the desk in front of you so that everyone in your team can see them.
3. Look for a person in your team who could use one of your shapes.
4. Without speaking, offer them the shape they need.
5. Accept a shape that is offered to you.
6. Stand up when everyone in your team has completed his or her own square.
7. Record the time when your team finished.
8. Calculate how long it took your team to complete their squares.

Rules

- This is a SILENT game. No one can speak once the game has begun.
- You are not allowed to take a piece from a team member. That team member has to see that you need their piece and OFFER it to you.

When you have completed the game, put the shapes back into their corresponding envelopes.

Repeat the game

Mix up the envelopes so that each person starts with a different envelope of shapes to what they started with previously. (ie. The person that started with 'A' shapes previously starts with 'B' shapes. The person that started with 'B' shapes previously starts with 'C' shapes, and so on.)

	GAME 1	GAME 2	GAME 3	GAME 4
Starting time				
Finishing time				
Time taken				

Did your times improve the more games your team played?

Why or why not?

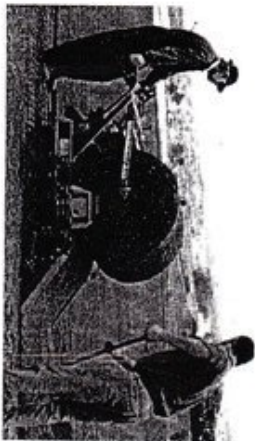
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Area of a rectangle

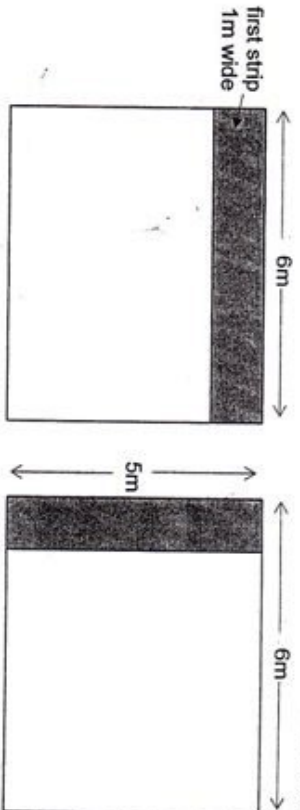
Resources required:
3 coloured pencils per student.



These two men are laying turf in strips that are one metre wide.

The men need to turf two identical lawns with strips of turf 1m wide. Each lawn is 6m long and 5m wide (as shown in the diagram below). 1cm on the diagram is equivalent to 1m in real life.

They turf the first lawn by laying strips 6m long. Draw these strips on the diagram. How many are needed? What length of turf is needed altogether for this lawn?



They turf the second lawn by laying strips 5m long. Draw these strips on the diagram. How many are needed?

What length of turf is needed altogether for this lawn?

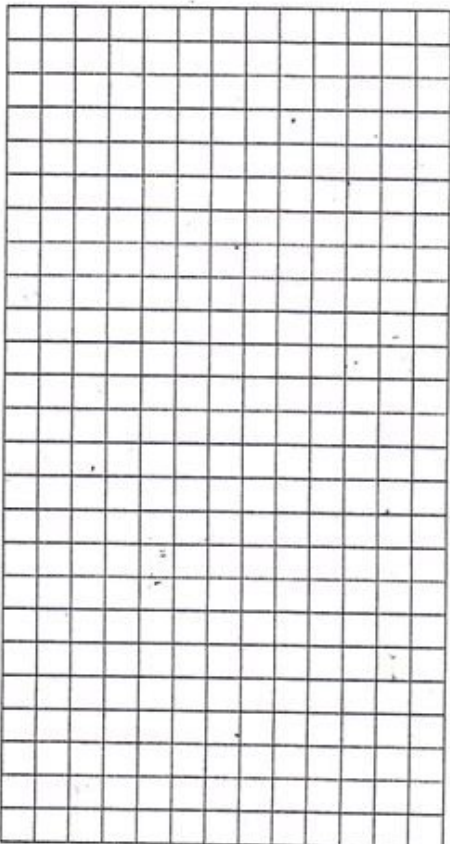
Why is the same length of turf required no matter which way they decide to lay it?

If a rectangle is b units long and h units wide, what is its area (A)?

Area of a rectangle $A = \dots\dots\dots$

Why do the length and width of a rectangle need to be in the same units to calculate its area?

The grid below has squares with sides 1 unit long. With a pencil, draw along grid lines to make 6 rectangles that each have an area of 12 square units. Give each rectangle a different base length.



Do all rectangles with the same area have the same perimeter?

If two of your rectangles have the same shape, colour them with the same colour.

Colour rectangles with different shapes, different colours.

List all the different side lengths of your rectangles.

These side lengths should all be factors of 12. Why?

If you know the area of a rectangle (A) and its length (b), how can you work out its width (h)?

If you know the area of a rectangle (A) and its width (h), how can you work out its length (b)?

If a rectangle has an area of 36 square units and one side is 9 units long,

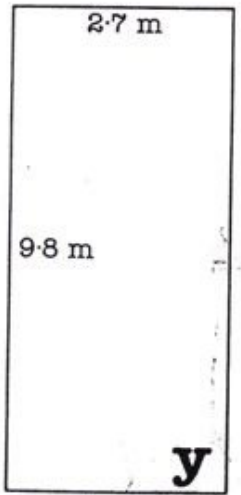
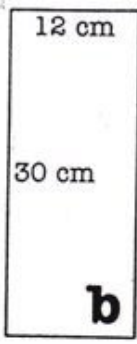
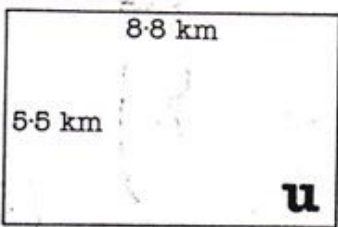
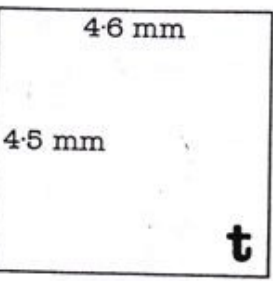
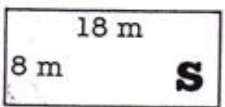
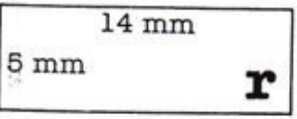
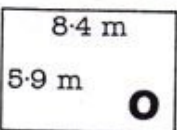
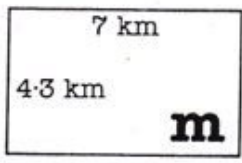
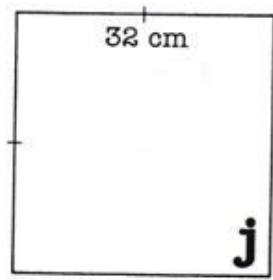
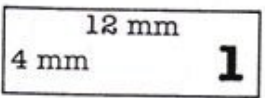
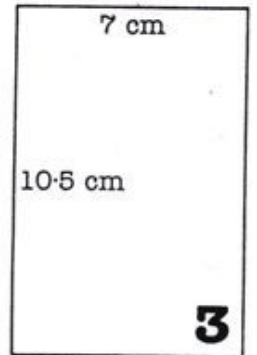
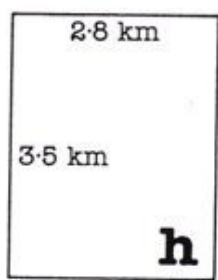
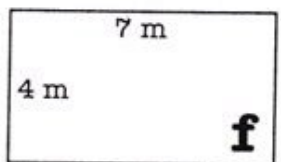
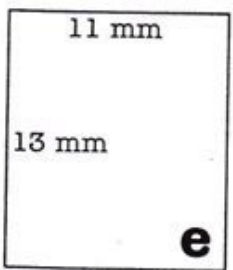
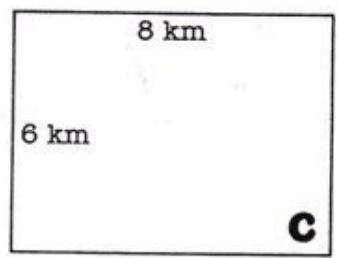
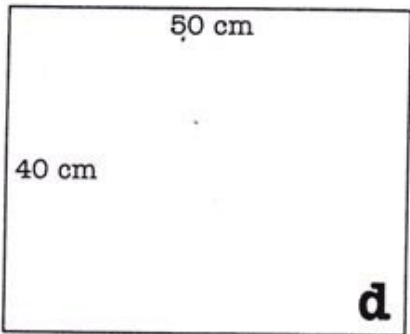
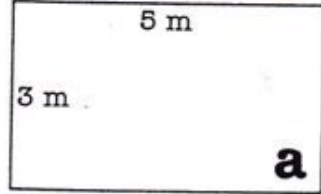
- what is the length of the perpendicular side?
- what is the perimeter of the rectangle?

Why were the soldiers tired on April 1st?



Calculate the areas of the rectangles given the rectangles given to find the puzzle answer code.

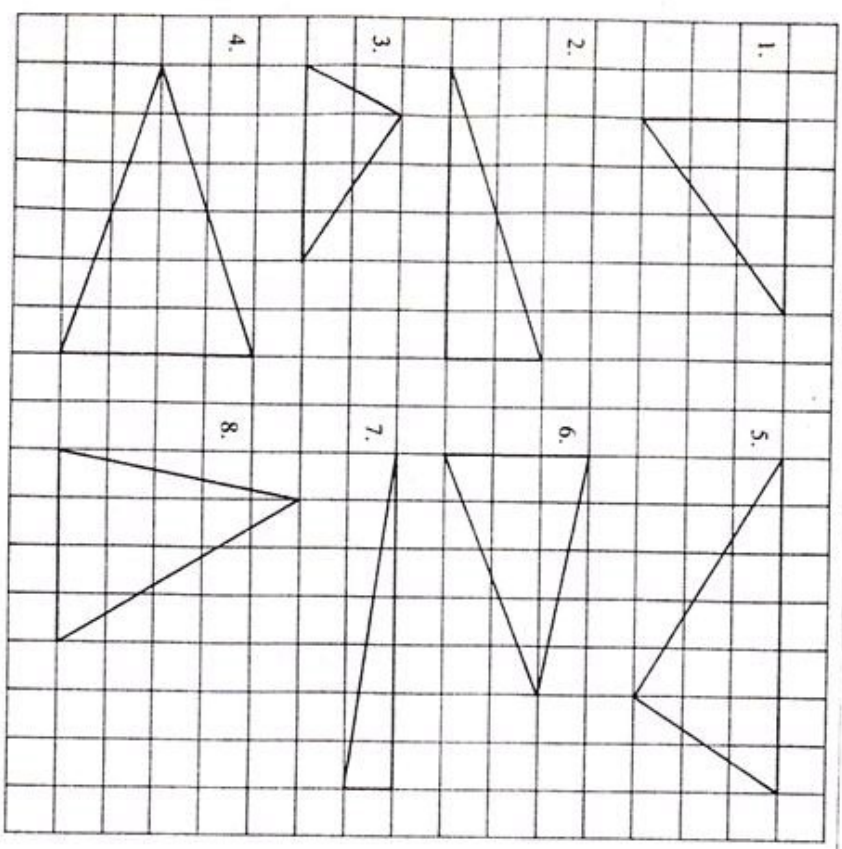
360 cm ²	143 mm ²	48 km ²	15 m ²	48.4 km ²	144 m ²	143 mm ²	20.7 mm ²	9.8 km ²
143 mm ²	26.46 m ²	9.8 km ²	15 m ²	2000 cm ²	1024 cm ²	48.4 km ²	144 m ²	
20.7 mm ²	9.8 km ²	15 m ²	2000 cm ²	15 m ²	30.1 km ²	15 m ²	70 mm ²	48 km ²
9.8 km ²	49.56 m ²	28 m ²	73.5 cm ²	48 mm ²	2000 cm ²	15 m ²	26.46 m ²	144 m ²



AREA OF A TRIANGLE

* MAKE EACH TRIANGLE INTO A RECTANGLE

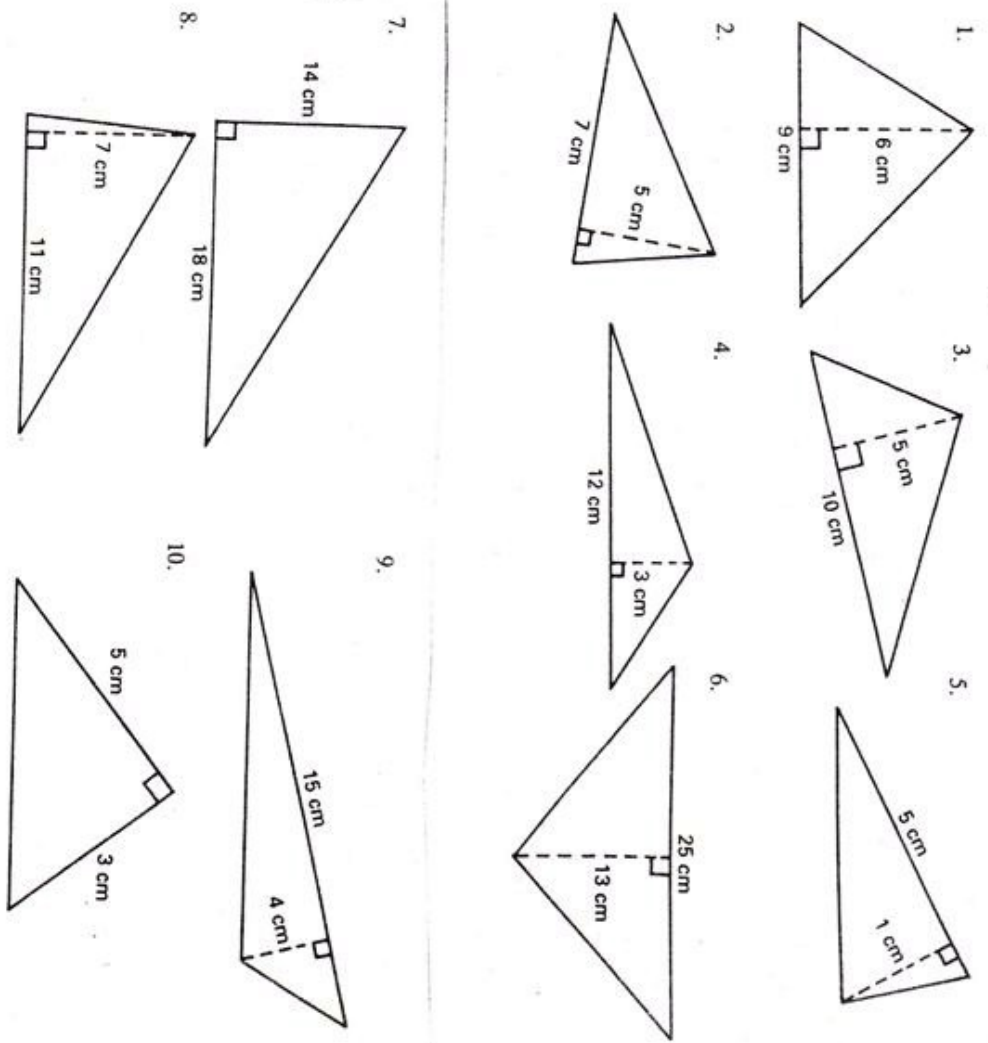
* SHADE EACH HALF A DIFFERENT COLOUR



FORMULA :

Area of a triangle = $\frac{1}{2}$ \times base \times height

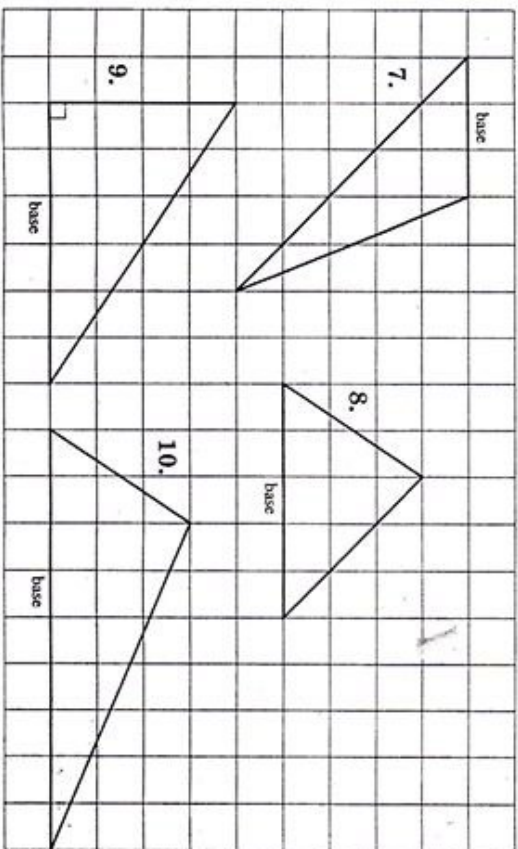
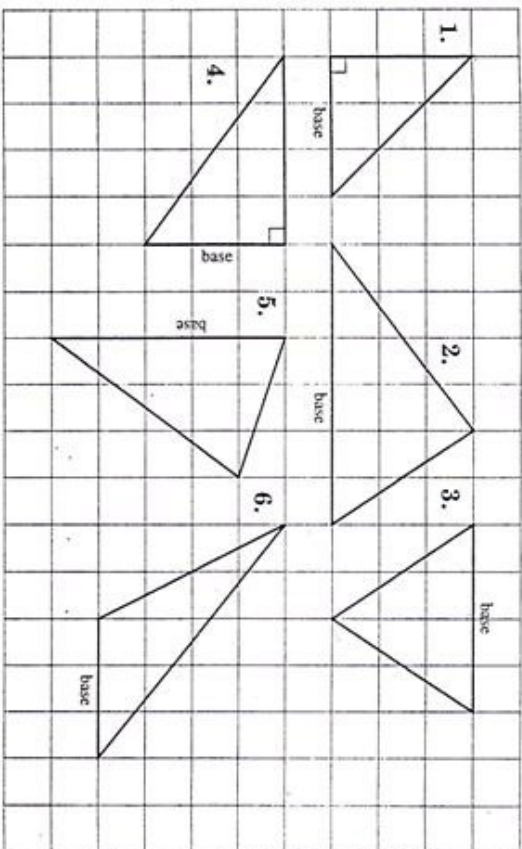
Find the area of each triangle in cm^2 :



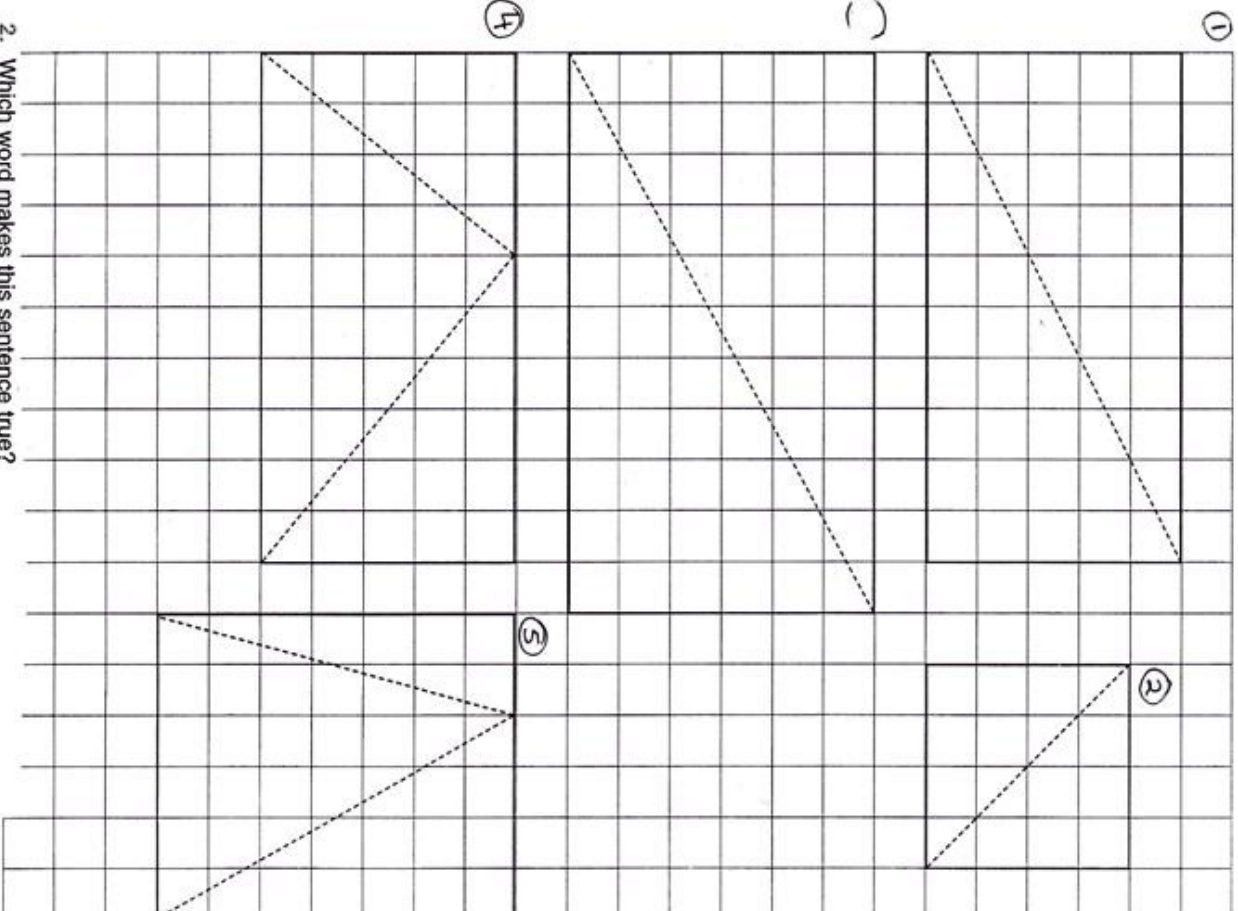
BLM 10.4 Triangles

perpendicular

- ① Draw and label the height on each triangle. ② Find the Area of each triangle.



BLM 10.3 Area of triangles

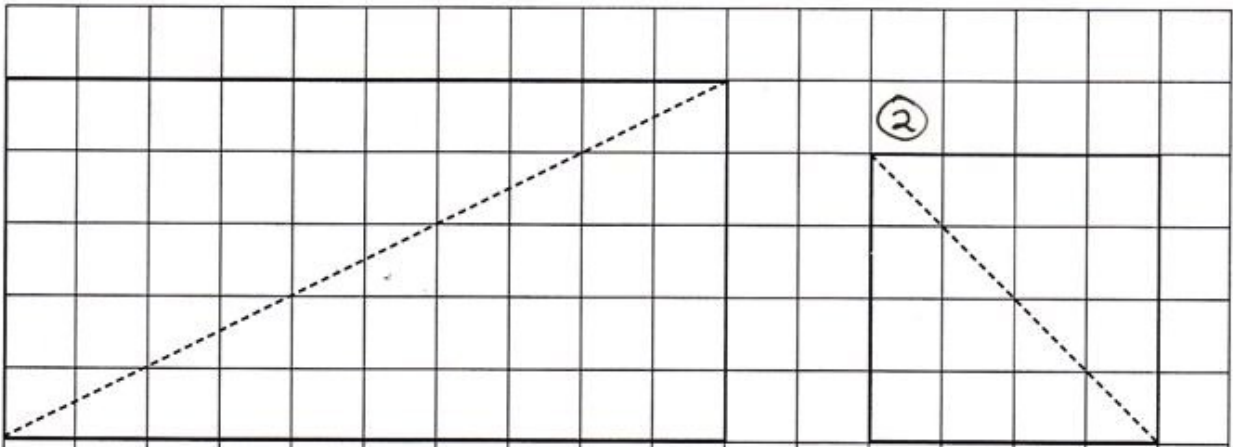


2. Which word makes this sentence true?
 (a) The area of the triangle is half/double the area of the rectangle.

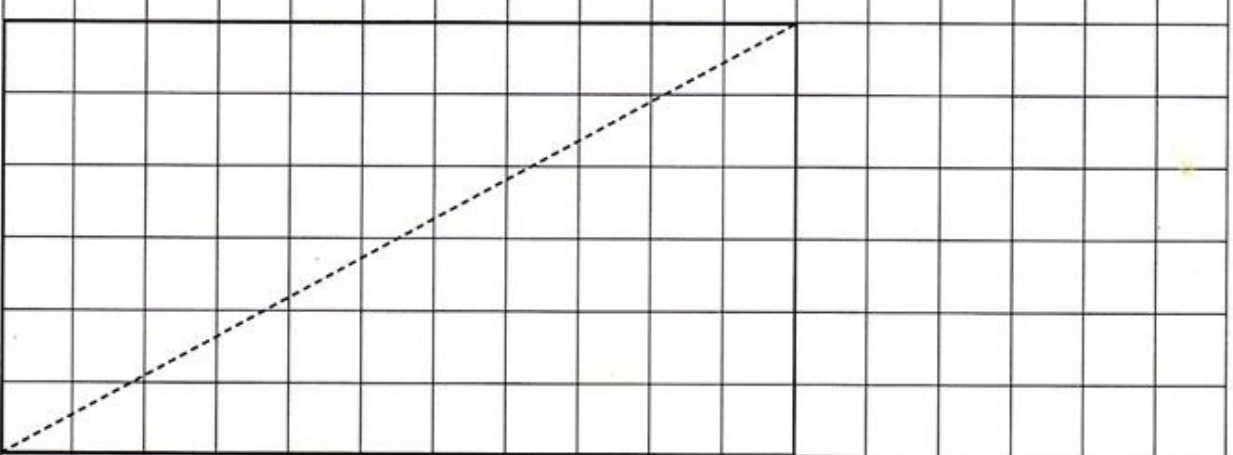
BLM 10.3

Area of triangles

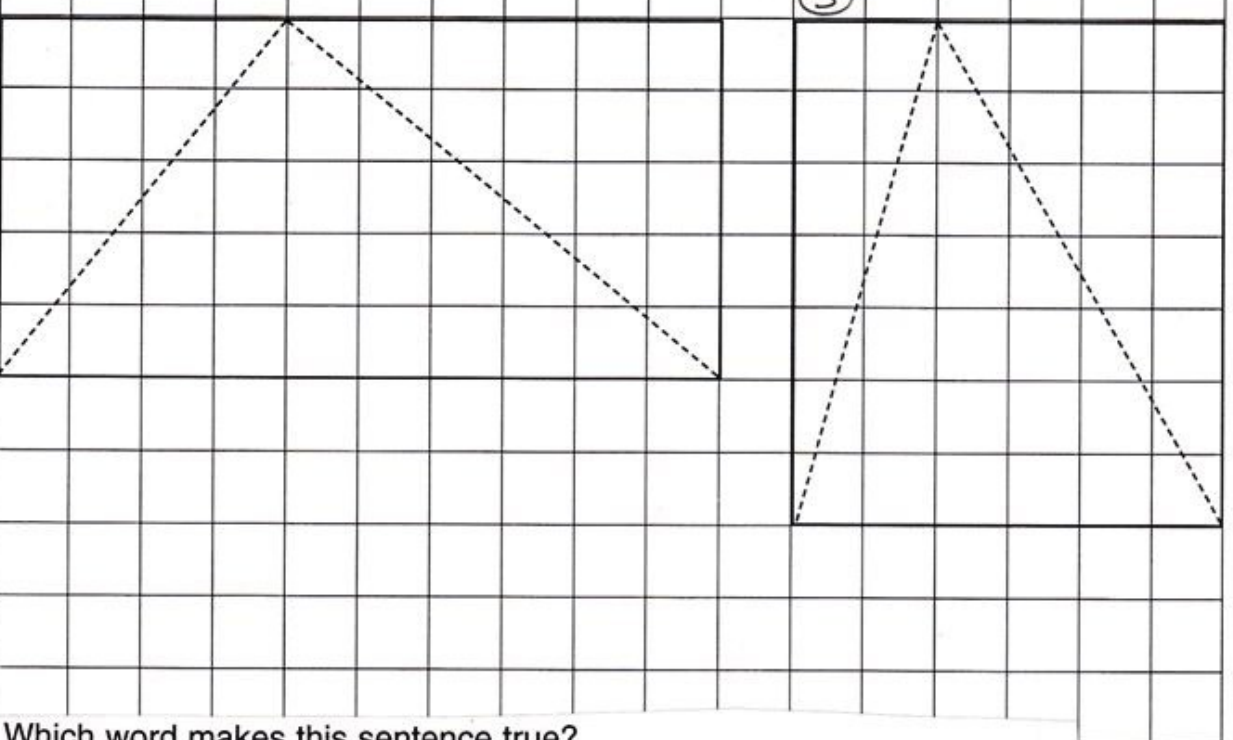
①



②



④

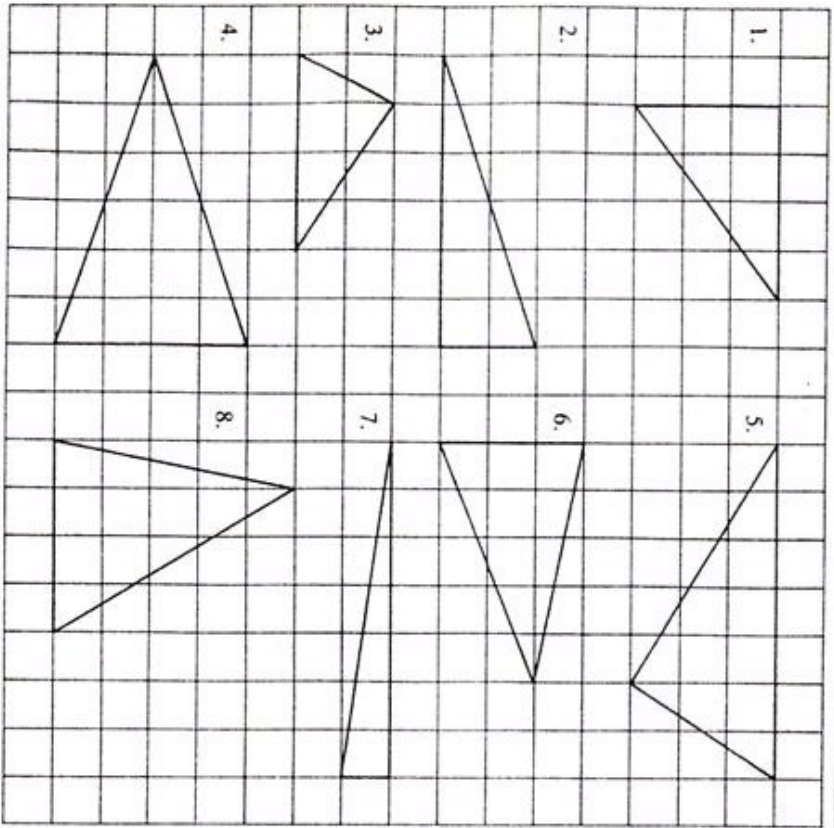


2. Which word makes this sentence true?

- (a) The area of the triangle is half/double the area of the rectangle.

AREA OF A TRIANGLE

- * MAKE EACH TRIANGLE INTO A RECTANGLE
- * SHADE EACH HALF A DIFFERENT COLOUR

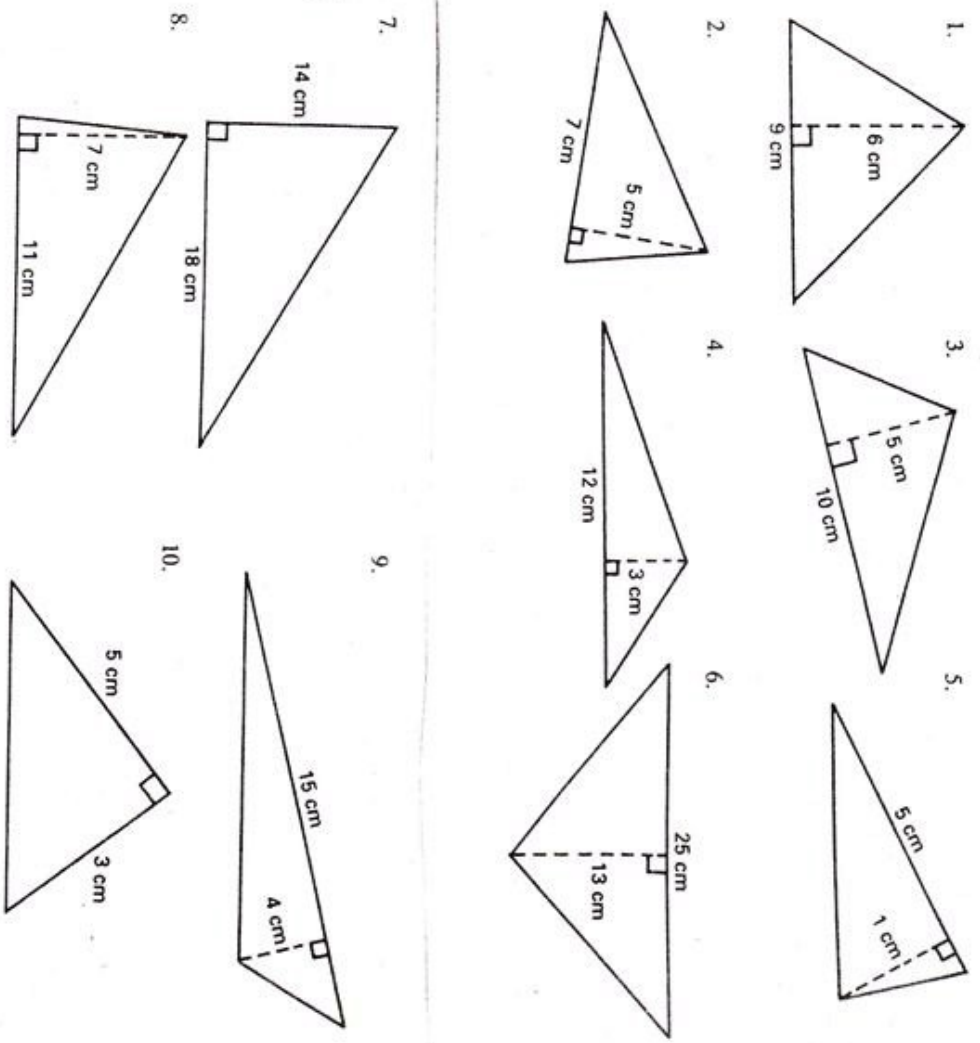


FORMULA :
 Area of a triangle = $\frac{1}{2}$ X

=

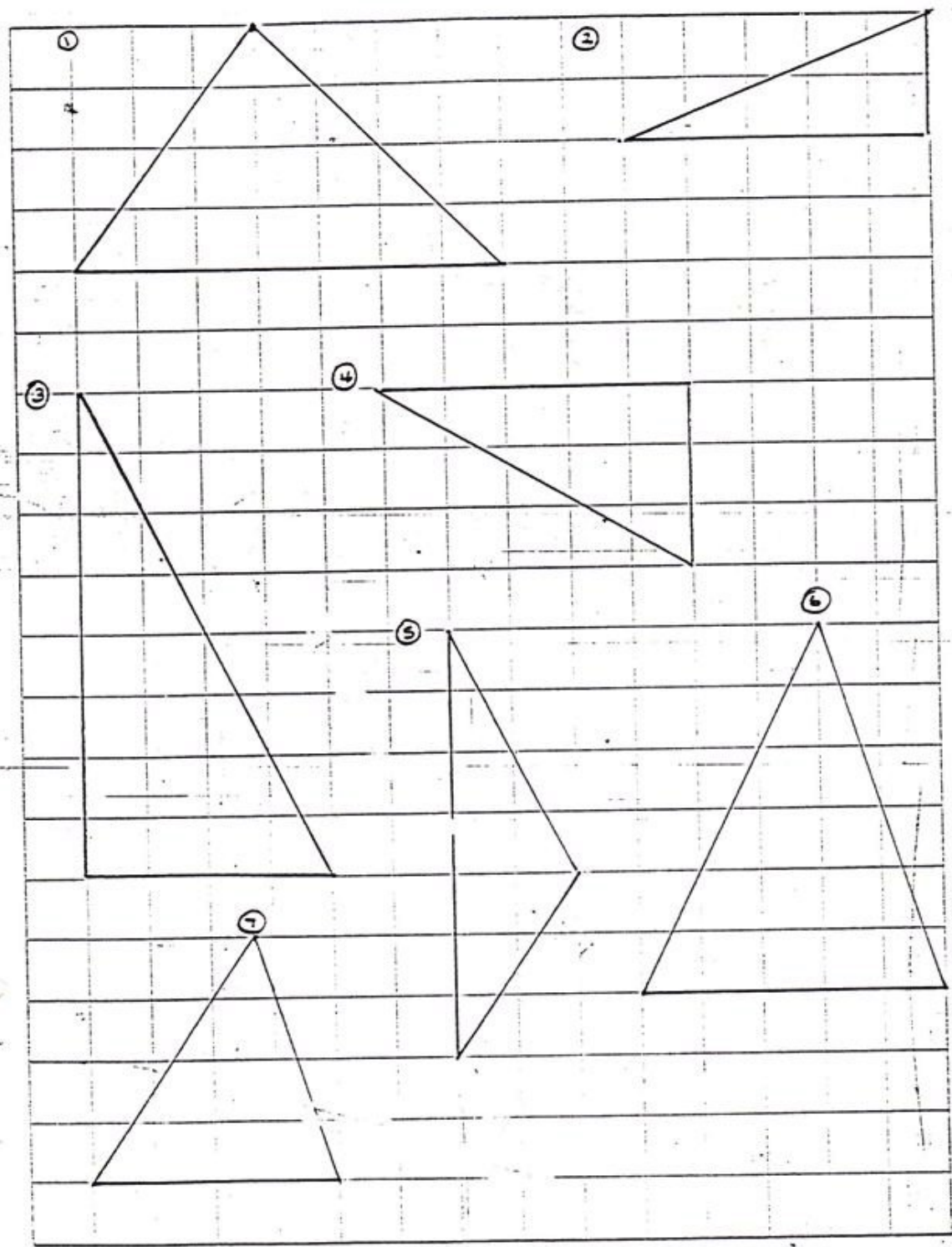
X

Find the area of each triangle in cm^2 :



1 centimetre Grid

AREA OF A TRIANGLE



BLM 10.4

Triangles

perpendicular

- ① Draw and label the height on each triangle. ② Find the Area of each triangle.

