## **Triangle as Parts of Rectangle**

Suppose we have a paper that is shaped like a rectangle. Fold the paper diagonally, such that the paper is divided into two parts. You can see the rectangle shaped paper is divided into two triangles.

Now, if we find the area of these two triangles and add them together, the resulting value will be the area of the whole paper, i.e., the rectangle.

## Let us understand with an example:

**Example:** Find the area of a rectangle whose length = 6 cm and breadth = 5cm.

Solution: If we divide the rectangle, along its diagonal, into two triangles. The two triangles obtained are both right-angled triangles.

Height of the right triangles = 5cm each

Base of the right triangle = 6 cm each

Now, by the formula of area of triangle we know;

Area of Triangle-1 = 1/2 (base) x (height)

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= 1/2 (6cm) x (5cm)
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 $= 20 \text{cm}^2$ 

The area of another triangle will also be the same, since height and base values are the same. Therefore,

Area of Triangle-2 =  $20 \text{ cm}^2$ 

Now if we add, the areas of the two triangles, we get;

Area of (Triangle-1 and Triangle-2) =  $20 \text{ cm}^2 + 20 \text{ cm}^2$ 

Area = 40 sq.cm