Class Activity 1

Suppose $x^2 + bx + c = (x + p)^2$.

1. Copy and complete the following table.

p	$(x + p)^2$	$x^2 + bx + c$	b	c
5	$(x + 5)^2$	$x^2 + 10x + 25$	10	25
3				
-7				
$-\dfrac{1}{2}$				
		$x^2 + 2x + 1$		
		$x^2 - 4x + 4$		
			12	
			-8	
			3	
			-5	

$(x + a)^2 = x^2 + 2ax + a^2$
$(x - a)^2 = x^2 - 2ax + a^2$

Recall

2. The figure is made up of a square and two identical rectangles.
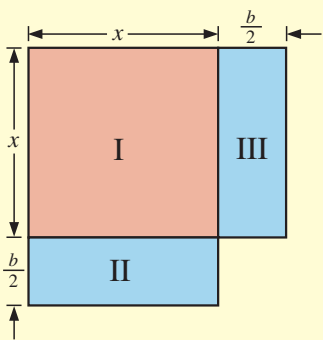   **(a)** Find Area I + Area II + Area III.

The use of an algorithmic approach, which eventually gave rise to quadratic equations, started around 3000 BC with the Babylonians. One of its uses was for calculating the amount of crops that the farmers had to pay the taxmen.

MathsBits

   (b) To make the figure a square, what shape should be added to it?

3. What is the area of the shape obtained in **2(b)**?