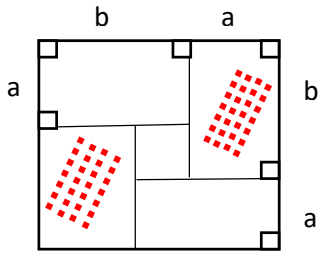
Square

If we want to understand why

$$(a+b)^2 - 4ab = (a - b)^2$$

The best way is by a drawing



The square that is side is (a + b)

The small square is side (b – a)

We have

$$4.ab + (b - a)^2 = (a + b)^2$$

$$4ab + a^2 - 2ab + b^2 = a^2 + 2ab + b^2$$

$$2ab = 2ab$$

Exercise $\Rightarrow$ $(x + 4)^2 - 4\,(x.4) = 9$

$$(x - 4)^2 = 9$$

$$x - 4 = \pm 3$$

$x = 4 + 3 = 7$ $\qquad$ $x = 4 - 3 = 1$