

# Perfect Square Trinomials

## Part 2

$$a^2 \pm 2ab + b^2$$

How do we  
get  $a$  from  
 $a^2$ ?

Square root  
comes to  
mind.

- While  $\sqrt{a^2} = a$  is only true for  $a > 0$ ,  
let's consider this perspective:

$$\Rightarrow a^2 \pm 2\sqrt{a^2}\sqrt{b^2} + b^2$$

$\uparrow$   
first  
term
 $\uparrow$   
last  
term

$$\Rightarrow \boxed{\text{first term}} \pm 2\sqrt{\text{first term}}\sqrt{\text{last term}} + \text{last term}$$

This is the structure of a PST.

Example: Let's form a PST (compose a PST)

$$4x^2 - 2(2x)(3) + 9$$

$4x^2$  perfect square  
 $\uparrow$   
choose plus or minus

$9$  another perfect square.

Note how a PST ends with a positive

$$= 4x^2 - 12x + 9 = (? )^2$$