

## Solve Quadratic Equations With the Square Root Property

- ① Isolate the expression containing the squared term
- ② Use the square root property:  
If  $x^2 = p$  Then  $x = \pm\sqrt{p} \rightarrow \sqrt{p}$  and  $-\sqrt{p}$
- ③ Isolate the variable if necessary
- ④ Solve and check solutions

## Solve Quadratic Equations by Completing the Square $ax^2 + bx + c = 0$

- ① Divide the entire equation by  $a$
- ② Rewrite as  $x^2 + \frac{b}{a}x = -\frac{c}{a}$
- ③ Complete the Square on  $x^2 + \frac{b}{a}x$   
i) Take  $\frac{1}{2}$  • the coefficient of  $x$  ( $\frac{b}{a}$ ), square it and add to both sides of the equation  $\rightarrow [\frac{1}{2} \cdot \frac{b}{a}]^2$
- ④ Factor the perfect square Trinomial
- ⑤ Use the square root property  
If  $x^2 = p$  then  $x = \pm\sqrt{p}$
- ⑥ Check solutions