

# Unit 2

Tuesday, September 5, 2017 10:38 AM

## Solving Quadratic Equations.

### Ch 5.

- Square Root Method
  - CTS  $\Rightarrow$  Square Root Method.
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Solve:

$$\sqrt{x^2} = \sqrt{9}$$

$$x = \pm 3 \begin{array}{l} \rightarrow +3 \\ \searrow -3 \end{array}$$

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$$\sqrt{x^2} = \sqrt{5}$$

$$x = \pm\sqrt{5} \begin{array}{l} \rightarrow +\sqrt{5} \\ \searrow -\sqrt{5} \end{array}$$

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$$\sqrt{(x-3)^2} = \sqrt{10}$$

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$$X - 3 = \pm \sqrt{10}$$

$$X = 3 \pm \sqrt{10}$$

$$3 + \sqrt{10}$$

$$6.162$$

$$3 - \sqrt{10}$$

$$-0.162$$

Background:

$$\sqrt{12}$$

$$\sqrt{4 \cdot 3}$$

$$\sqrt{4} \cdot \sqrt{3}$$

$$\pm 2\sqrt{3}$$

simplify Radical  
form

$$\begin{aligned} &\sqrt{48} \\ &\sqrt{4 \cdot 12} \\ &\sqrt{4 \cdot 4 \cdot 3} \\ &2 \cdot 2 \cdot \sqrt{3} \\ &\pm 4\sqrt{3} \end{aligned}$$

\*

Prime factor

$$\begin{array}{l} 2 \sqrt{\begin{array}{l} 2 \overline{) 48} \\ 2 \overline{) 24} \end{array}} \\ 2 \sqrt{\begin{array}{l} 2 \overline{) 12} \\ 2 \overline{) 6} \end{array}} \\ \sqrt{3} \sqrt{\begin{array}{l} 3 \overline{) 3} \\ 1 \overline{) 1} \end{array}} \end{array}$$

$$4\sqrt{3}$$

Solve:

$$x^2 + 10x + 25 = 10$$

perfect  
□  
Trinomial.

$$\sqrt{(x+5)^2} = \sqrt{10}$$

$$x+5 = \pm\sqrt{10}$$

$$x = -5 \pm \sqrt{10}$$

$$\rightarrow -5 + \sqrt{10}$$

$$-1.837$$

$$\rightarrow -5 - \sqrt{10}$$

$$-8.162$$

Trinomial.

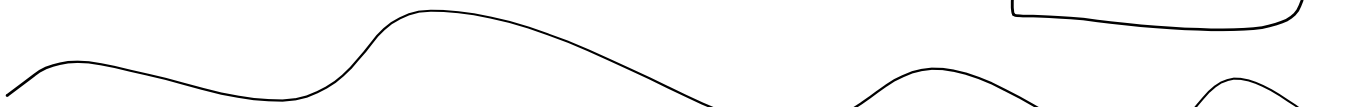
$$x^2 + 10x + 25 = 0$$

$$x = -5 \pm \sqrt{10}$$

$$\begin{aligned} & -5 + \sqrt{10} \\ & -1.837 \end{aligned}$$

$$-5 - \sqrt{10}$$

$$-8.162$$



$$\frac{x^2 + 6x + 2}{\text{perfect?}} = 70$$

I want a 9!

• fod.  
(stomp!!)

$$-2 \quad -2$$

$$\begin{aligned} x^2 + 6x + 9 &= 68 \\ \hline \hline \hline \sqrt{(x+3)^2} &= \sqrt{77} \end{aligned}$$

$$x+3 = \pm \sqrt{77}$$

Section 5.4

√ method  
2-4  
20-22  
41-49

OTS

26-30

51, 52, 55-57, 59