

④⑤ $-24 = -8x^2$ using QF

$$8x^2 + 0x - 24 = 0$$

$$8 \left[x^2 - 3 \right] = 0$$

$$a = 1$$

$$b = 0$$

$$c = -3$$

$$b^2 - 4ac$$

$$(0)^2 - 4(1)(-3)$$

$$+12 = d$$

$$\sqrt{12} = \sqrt{4 \cdot 3} = 2\sqrt{3}$$

$$x = \frac{-b \pm \sqrt{d}}{2a} = \frac{0 \pm \sqrt{12}}{2}$$

$$x = \pm \frac{2\sqrt{3}}{2} = \boxed{\{-\sqrt{3}, \sqrt{3}\}}$$

CK $-24 \stackrel{?}{=} -8(\sqrt{3})^2$
 $-24 \stackrel{?}{=} -8(3) \checkmark$

mth112

CLASS
NOTES

Fri

8-24-12

④⑥ $2b^2 - 49 = 1$

use Quad Form.

$$2b^2 - 50 = 0$$

$$2[b^2 - 25] = 0$$

NOTE

$$2(b-5)(b+5) = 0$$

$$a = 1$$

$$b^2 - 4ac$$

$$b = 0$$

$$(0)^2 - 4(1)(-25)$$

$$c = -25$$

$$100 = d$$

$$x = \frac{0 \pm 10}{2} = \boxed{\pm 5}$$

CK



DIFF OF SQUARES

$$x^2 - 1 = (x-1)(x+1)$$

$$\frac{(x-1)(x+5)}{(x^2-1)}$$

$$\frac{x^2 + 4x - 5}{x^2 - 1} = \frac{(x-1)(x+5)}{(x-1)(x+1)}$$

$$= \left(\frac{x+5}{x+1} \right)$$

$$(37) \quad 0 = -4x^2 - 8x + 29 \quad \text{CTS}$$

$$\frac{4x^2}{4} + \frac{8x}{4} = \frac{29}{4}$$

$$x^2 + 2x + \{1^2\} = \frac{29}{4} + \left\{\frac{4}{4}\right\}$$

$$\downarrow \quad \downarrow$$

$$(x+1)^2 = \frac{33}{4}$$

$$x = -1 \pm \frac{\sqrt{33}}{2} = \boxed{\frac{-2 \pm \sqrt{33}}{2}}$$

$$\underline{\text{CK}} \quad 0 \stackrel{?}{=} -4\left(\frac{-2+\sqrt{33}}{2}\right)^2 - 8\left(\frac{-2+\sqrt{33}}{2}\right) + 29$$

$$= -4\left[\frac{4 - 4\sqrt{33} + 33}{4}\right] + \frac{16 - 8\sqrt{33}}{2} + 29$$

$$= -4 + 4\cancel{\sqrt{33}} - 33 + 8 - 4\cancel{\sqrt{33}} + 29$$

$$= -37 + 37$$

$$0 = 0 \quad \checkmark$$