

Using the Square Root Property

PEMDAS

$$\text{Ex) } 3x^2 - 4 = 68$$

$$\frac{3x^2}{3} = \frac{72}{3}$$

$$\sqrt{x^2} = \sqrt{24}$$

$$x = \pm 2\sqrt{6}$$

$$\begin{array}{c} \sqrt{24} \\ \swarrow \quad \searrow \\ \sqrt{4} \quad \sqrt{6} \\ 2\sqrt{6} \end{array}$$

$$\text{Ex) } x^2 - 10x + 25 = 27$$

$$(x-5)(x-5) = 27$$

$$\sqrt{(x-5)^2} = \sqrt{27}$$

$$x-5 = \pm\sqrt{27}$$

$$x-5 = \frac{\pm}{+5} 3\sqrt{3}$$

$$\begin{array}{c} \sqrt{27} \\ \swarrow \quad \searrow \\ \sqrt{9} \quad \sqrt{3} \\ 3\sqrt{3} \end{array}$$

$$x = 5 \pm 3\sqrt{3}$$

$$\text{Ex) } x^2 + 8x + 16 = 49$$

$$(x+4)(x+4) = 49$$

$$\sqrt{(x+4)^2} = \sqrt{49}$$

$$x+4 = \pm 7$$

$$x = -4 \pm 7 \quad \begin{array}{l} \rightarrow x = -4 + 7 = 3 \\ \rightarrow x = -4 - 7 = -11 \end{array}$$

p. 345

2-4, 20-22, 41-49 odd