

SQUARE ROOT PROPERTY

IF

$$p^2 = Q$$

THEN

$$p = \pm \sqrt{Q}$$

$$\textcircled{1} x^2 = 25$$

$$x = \pm \sqrt{25}$$

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

$$x = \pm 5$$

$$x = -5 \quad x = 5$$

$$\textcircled{2} w^2 - 4 = 20$$

$$w^2 = 20 + 4$$

$$w^2 = 24$$

$$w = \pm \sqrt{24}$$

$$w = \pm \sqrt{2 \cdot 2 \cdot 3}$$

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

$$\textcircled{3} -5x^2 - 2 = 18$$

$$-5x^2 = 18 + 2$$

$$-5x^2 = 20$$

$$\frac{-5x^2}{-5} = \frac{20}{-5}$$

$$x^2 = -4$$

$$x = \pm \sqrt{-4}$$

$$x = \pm 2i$$

$$\textcircled{4} (3x-2)^2 = 9$$

$$3x-2 = \pm \sqrt{9}$$

$$3x-2 = \pm 3$$

$$3x = 2 \pm 3$$

$$\frac{3x}{3} = \frac{2 \pm 3}{3}$$

$$x = \frac{2 \pm 3}{3}$$

$$\textcircled{+} x = \frac{2+3}{3}$$

$$= \frac{5}{3}$$

$$\textcircled{-} x = \frac{2-3}{3}$$

$$= -\frac{1}{3}$$

$$\textcircled{5} \left(x + \frac{5}{2}\right)^2 = \frac{7}{4}$$

$$x + \frac{5}{2} = \pm \sqrt{\frac{7}{4}}$$

$$x + \frac{5}{2} = \pm \frac{\sqrt{7}}{2}$$

$$x + \frac{5}{2} = \pm \frac{\sqrt{7}}{2}$$

$$x = -\frac{5}{2} \pm \frac{\sqrt{7}}{2}$$

$$x = \frac{-5 \pm \sqrt{7}}{2}$$