

Section 3.5

$$24. \quad x^3 - x^2 + x = 0$$

$$x(x^2 - x + 1) = 0$$

$$\textcircled{x=0} \text{ or } x^2 - x + 1 = 0$$

$$x = \frac{1 \pm \sqrt{1-4}}{2}$$

$$x = \frac{1 \pm \sqrt{-3}}{2}$$

multiplicity
1 each.

$$\textcircled{x = \frac{1}{2} + \frac{\sqrt{3}}{2}i} \text{ or } \textcircled{\frac{1}{2} - \frac{\sqrt{3}}{2}i}$$

$$32. \quad x^4 + 10x^2 + 25 = 0$$

$$(x^2 + 5)(x^2 + 5) = 0$$

$$x^2 + 5 = 0$$

$$x^2 = -5$$

$$|x| = \sqrt{-5}$$

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

$$\boxed{x = \sqrt{5}i \text{ or } -\sqrt{5}i}$$

multiplicity 2
each