

The Quadratic Equation is defined as:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

The equation, $3x^2 + 4x + 3$,
assuming $a = 3, b = 4, c = 3$
plugged into the quadratic equation is:

$$x = \frac{-(4) \pm \sqrt{(4)^2 - 4(3)(3)}}{2(3)}$$

Simplified, is:

$$x = \frac{-4 \pm \sqrt{16 - 36}}{6}$$

$$x = \frac{-4 \pm \sqrt{-20}}{6}$$

$$x = \frac{-4 \pm \sqrt{20}i}{6}$$

$$x = \frac{-4 \pm 2\sqrt{5}i}{6}$$

$$x = \frac{-2 \pm \sqrt{5}i}{3}$$

$$x = \frac{1}{3}(-2 + \sqrt{5}i) \text{ and } x = \frac{1}{3}(-2 - \sqrt{5}i)$$