

$$x^2 - 2x - 2 = 0$$

$$a = 1$$
$$b = -2$$
$$c = -2$$

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

$$\frac{-2 \pm \sqrt{-2^2 - 4(1)(-2)}}{2(1)}$$

$$\frac{-(-2) \pm 2\sqrt{3}}{2 \cdot 1}$$

$$\frac{-2 \pm \sqrt{4 + 8}}{2}$$

$$\frac{-(-2) \pm 2\sqrt{3}}{2 \cdot 1}$$

$$\frac{-2 \pm \sqrt{12}}{2}$$

$$\downarrow$$
$$1 \pm \sqrt{3}$$

$$\frac{-2 \pm 6}{2}$$

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

$$4x^2 - 24 = 0$$

$$4x^2 - 24 + 24 = 0 + 24$$

$$4x^2 = 24$$

$$\frac{4x^2}{4} = \frac{24}{4}$$

$$x = \sqrt{6}$$

$$2x^2 - 6x - 2 = 4x - 3$$

$$2x^2 - 6x - 2 + 3 = 4x - 3 + 3$$

$$2x^2 - 6x + 1 = 4x$$

$$2x^2 - 6x + 1 - 4x = 4x - 4x$$

$$2x^2 - 10x + 1 = 0$$

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

$$a = 2$$

$$b = -10$$

$$c = 1$$

$$\frac{-10 \pm \sqrt{10^2 - 4(2)(1)}}{2(2)}$$

$$= \frac{-10 \pm \sqrt{23}}{4}$$

$$\frac{-10 + 2\sqrt{23}}{2(2)}$$

$$R1 = \frac{5 - \sqrt{23}}{4}$$

$$x = \frac{-10 - 2\sqrt{23}}{2(2)}$$

$$-74x^2 + 4x + 74 = 6x^2$$

$$-74x^2 + 4x + 74 - 6x^2 = 6x^2 - 6x^2$$

$$-20x^2 + 4x + 74 = 0$$

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

$$x = \frac{-4 + 4\sqrt{71}}{2(-20)}$$

$$\frac{-4 \pm \sqrt{4^2 - 4(-20)(74)}}{2(-20)}$$

$$x = \frac{-4 - 4\sqrt{71}}{2(-20)}$$

$$\frac{-4 \pm \sqrt{16 + 7120}}{40}$$

$$x = \frac{-4 + 4\sqrt{71}}{40}$$

$$\frac{20}{10}$$

$$\frac{-4 \pm \sqrt{7136}}{40}$$

$$x = \frac{-1 + \sqrt{71}}{10}$$