Note 6

$y = ax^2 + bx + c$

Quadratic formula $a=2\ b=4\ c=11$

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

$x = \frac{-4 \pm \sqrt{(4)^2-4(2)(11)}}{2(2)} = \frac{-4 \pm \sqrt{-72}}{4}$

$x = -4 \pm \sqrt{(-36)(2)}$

$2x^2+4x+11$

$a=2\ b=4\ c=11$

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

$a = \frac{-4 \pm \sqrt{4^2-4(2)11}}{4} \quad \frac{-4 \pm \sqrt{72}}{4}$

$x = \frac{-4 \pm \sqrt{(-36)(2)}}{4} \quad \frac{-4 \pm 6\sqrt{2}}{4}$

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

$(x-4)^{\frac{1}{2}} = (144)^{\frac{1}{2}}$

$(x-4) \pm 12$

$+4 \quad +4$

$x = 4 \pm 12$

$x = 4+12 = 16$

$x = 4-12 = 8$

$x^2\left[9 + \frac{3}{x} - \frac{2}{x} = 0\right]$

$9x^2 + \frac{3x^2}{x} - \frac{2x^2}{x} = 0$

$4x^2+3x-2=0$

$a=9\ b=3\ c=-2$

$x = \frac{-(3) \pm \sqrt{(3)^3-4(9)(-2)}}{2(9)} = \frac{-3 \pm \sqrt{9+72}}{18}$

$x = \frac{-3 \pm \sqrt{81}}{18} = \frac{-3 \pm 9}{6} = \frac{-1 \pm 3}{6}$

or $x = \frac{-1-3}{6} = \frac{-2}{3}$