

Elbert's Equation Solution

Solutions: The 6 solutions are $\frac{1}{3}$, 4, -2 , $\frac{1}{2}$, $-\frac{3}{2}$, and 0

Raising Any Number to the Zero Power

I know that any number to the zero power is equal to 1. So I can set $3x^2 - 13x + 4 = 0$. Solving this quadratic equation gives me $x = \frac{1}{3}$ and $x = 4$.

Raising One to Any Number

I know that if you raise the number 1 to any power, you get 1. So I can set $|2x^2 + 3x - 1| = 1$. So I can create two equations:

Equation 1:

$$2x^2 + 3x - 1 = 1$$

$$x = -2 \text{ or } x = \frac{1}{2}$$

Equation 2 (think about *why* I am allowed to set $2x^2 + 3x - 1$ equal to -1):

$$2x^2 + 3x - 1 = -1$$

$$x = -\frac{3}{2} \text{ or } x = 0$$