Recognizing and solving quadratic equations

Sometimes, the equation is not given in the form $ax^2 + bx + c$ directly, but if you look close enough, you will see it.

$x^6 - 3x^3 - 40$ can be written as $(x^3)^2 - 3(x^3)^1 - 40$, which is the quadratic equation form. Or you can substitute x^3 with p or any other variable.

$p^2 - 3p - 40 = 0$

$(p - 8)(p + 5) = 0$

$p = 8 \; or \; p = -5$

$x^3 = 8 \; or \; x^3 = -5$

$x = \sqrt[3]{8} \; or \; x = -\sqrt[3]{5}$