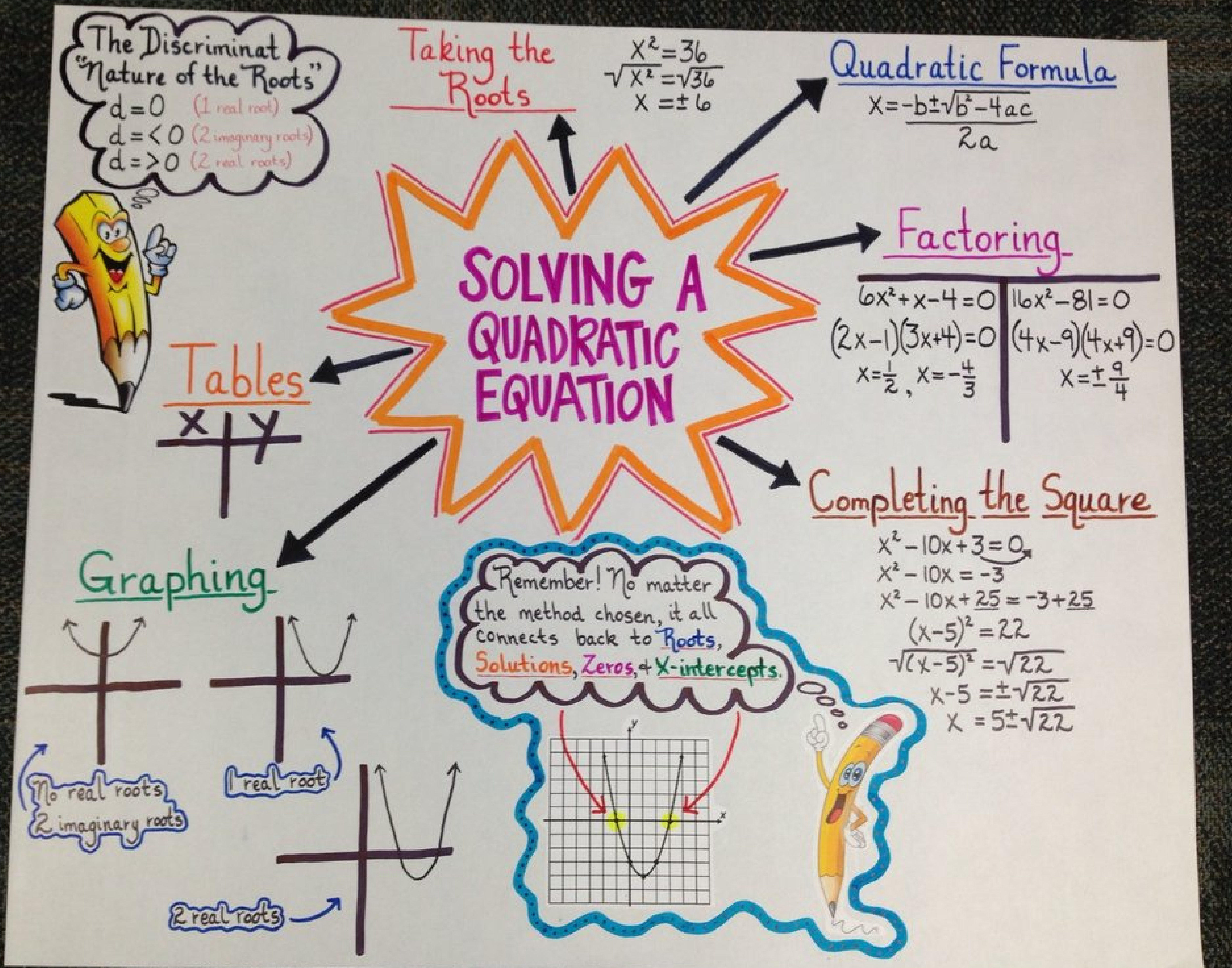
The Discriminat
"Nature of the Roots"
d=0 (1 real root)
d=<0 (2 imaginary roots)
d=>0 (2 real roots)
Taking the Roots
$X^2=36$
$\sqrt{X^2}=\sqrt{36}$
$X=\pm 6$
Quadratic Formula
$X=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$
SOLVING A QUADRATIC EQUATION
Factoring
$6x^2+x-4=0$
$(2x-1)(3x+4)=0$
$x=\frac{1}{2}, x=-\frac{4}{3}$
$16x^2-81=0$
$(4x-9)(4x+9)=0$
$x=\pm\frac{9}{4}$
Tables
x y
Completing the Square
$x^2-10x+3=0$
$x^2-10x=-3$
$x^2-10x+25=-3+25$
$(x-5)^2=22$
$\sqrt{(x-5)^2}=\sqrt{22}$
$x-5=\pm\sqrt{22}$
$x=5\pm\sqrt{22}$
Graphing
No real roots
2 imaginary roots
1 real root
2 real roots
Remember! No matter the method chosen, it all connects back to Roots, Solutions, Zeros, & X-intercepts.