

Nature of Roots of a Quadratic Equation

Quadratic Equation: ax^2+bx+c

$$D = b^2 - 4ac$$

$D=0$ The roots are real, equal and rational

$D>0$ and also a perfect squareThe roots are real, distinct and rational

$D>0$ but not a perfect squareThe roots are real, distinct and irrational

$D<0$ The roots are imaginary

$D\geq 0$ The roots are real