

I. Quadratic Equation: $ax^2 + bx + c = 0$

II. Quadratic Formula (p.619):

completing the square on the general form of the quadratic equation, yields two solutions given by...

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

III. Discriminant: $b^2 - 4ac < 0 \Rightarrow \sqrt{b^2 - 4ac}$ not a real #

IV. If $r > 0$ then $-r < 0$, and $\sqrt{-r} = \sqrt{r} \cdot \sqrt{-1} = \sqrt{r} \cdot i$

V. Examples (p.622): Problems #2-42(even)

VI. Complex Solutions:

when the discriminant is negative ($b^2 - 4ac < 0$),
the solutions to the quadratic equation are a
pair of complex conjugates ($a + bi$ & $a - bi$)...

VII. Examples (p.622): Problems #44,46

HW: pp.622-623 / Problems #1-27(odd),33,35,41,
43,47,51-65(odd)

Read pp.625-631 (section 9.6)