pp. 74-75 Discriminant Sect. 4.7

p. 74

Warm Up: **Simplify the following expressions.**

1. $(8+5i)-(1+2i)$

$7+3i$

2. $(10-3i)(7+i)$

$70+10i-21i-3i^2$

-1

$+3$

$73-11i$

pp. 74-75 Discriminant Sect. 4.7

p. 75

1) Look at each graph. Decide how many solutions each one has.
(If there is NO REAL solution, then the solution is IMAGINARY!)

2) Compute b^2-4ac for each equation.

3) What do you notice about this calculation and the number and type of solutions?

① 2 sol. 13 ② 1 sol. 0

③ 2 sol. 17 ④ 1 sol. 0

⑤ 0 sol. -8 ⑥ 0 sol. -15

What is the part of the Quadratic Formula that is under the Radical Sign?

p.74

This is called the DISCRIMINANT

$$x = \frac{-b \pm \sqrt{\quad}}{2a}$$

The Discriminant tells you how many and what kind of solutions you will get.

p.74

$b^2 - 4ac > 0$ ⟶ 2 real solutions

$b^2 - 4ac = 0$ ⟶ 1 real solution

$b^2 - 4ac < 0$ ⟶ 2 imaginary solutions

a) Find the Discriminant. $b^2 - 4ac$

b) Tell how many solutions and what type (real or imaginary).

1) $f(x) = -x^2 + 2x - 2$

$a=-1 \quad b=2 \quad c=-2$

$(2)^2 - 4(-1)(-2)$

-4

2 imaginary sol.

Review packet:

do #9 and 10, then continue working...

At 10:40, we will start Chapter 4 Test.