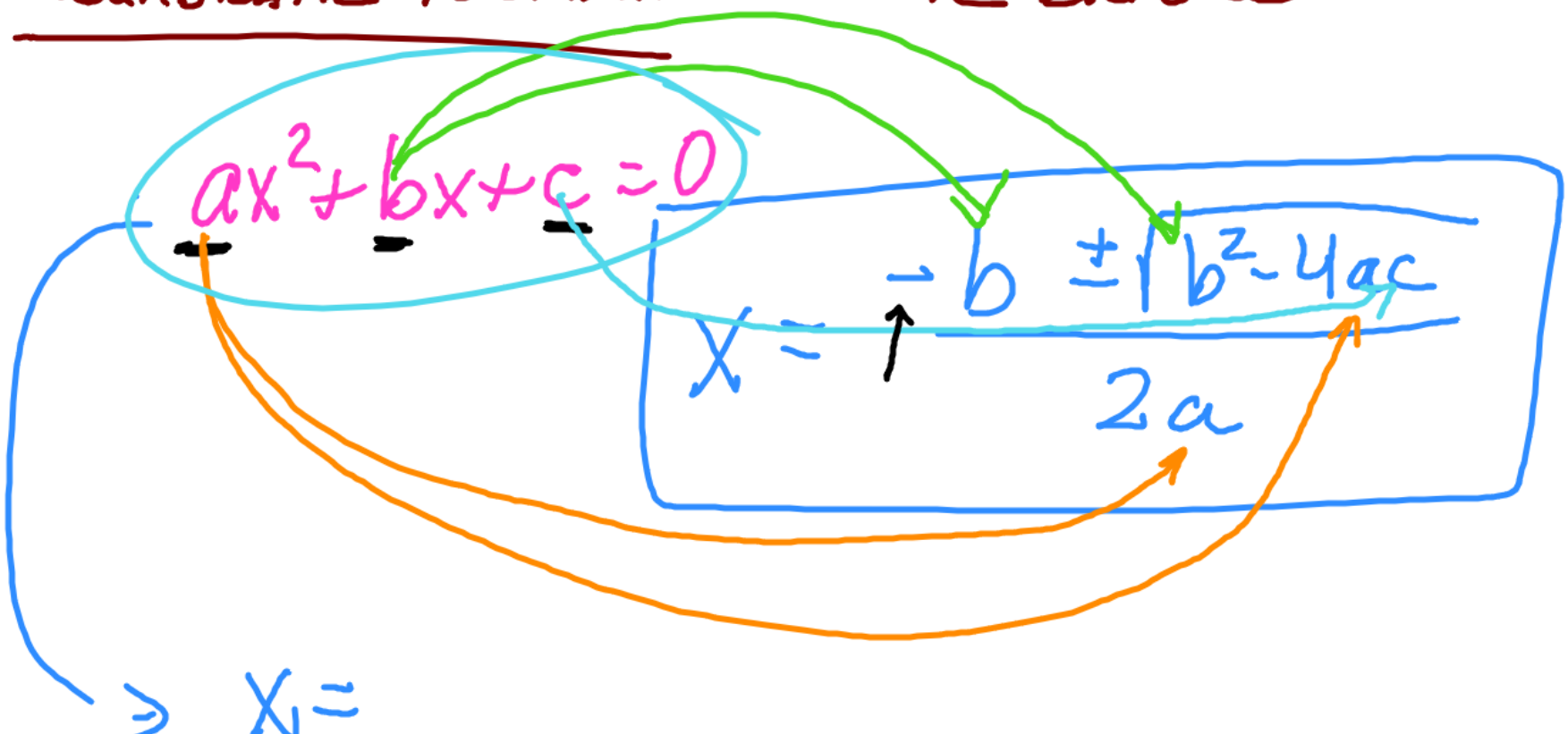
Quadratic Formula - "The Big One"



$1x^2+4x+3=0$

$a=1$

$b=4$

$c=3$

$2x^2-5x+3=0$

$a=2$

$b=-5$

$c=3$

$-5x^2+x+7=0$

$a=-5$

$b=1$

$c=7$

$2x^2 - 5x + 3 = 0$

$a = 2 \quad b = -5 \quad c = 3$

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

$$x = \frac{5 \pm \sqrt{25 - 4(2)(3)}}{2(2)}$$

$$= \frac{5 \pm \sqrt{1}}{4} = \frac{5 \pm 1}{4}$$

$$\frac{5+1}{4} = \frac{6}{4} = \frac{3}{2}$$

$$\frac{5-1}{4} = \frac{4}{4} = 1$$

$x = \frac{3}{2}, \; x = 1$

$x^2 - 8x + 16 = 0$

$x = \frac{8 \pm \sqrt{64 - 4(1)16}}{2}$

$64 - 64 = 0$

$\frac{8}{2} = 4$

$x^2 - 8x + 6 = 0$

$x = \frac{8 \pm \sqrt{64 - 4(1)6}}{2}$

$64 - 24 = 40$

$\frac{8 \pm \sqrt{40}}{2}$

$x^2 - 8x + 12 = 0$

$x = \frac{8 \pm \sqrt{64 - 4(1)(12)}}{2}$

$64 - 48 = 16$

$\frac{8 \pm 4}{2} \Rightarrow \frac{12}{2} = 6$

$\frac{4}{2} = 2$

$x^2 - 8x + 20 = 0$

$x = \frac{8 \pm \sqrt{64 - 4(1)(20)}}{2}$

$64 - 80$

$\sqrt{-16}$

Discriminant

$$b^2 - 4ac$$

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

- if positive → 2 solutions
- if zero → 1 solution
- if negative → 0 solution

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

$$3x^2 - 2x - 5 = 0$$

$b^2 - 4ac : 4 - 4(3)(-5)$

$4 + 60$

64

$$x = \frac{2 \pm \sqrt{64}}{2(3)}$$

8

$$= \frac{2 \pm 8}{6}$$

$$\frac{2+8}{6} = \frac{10}{6} = \frac{5}{3}$$

$$\frac{2-8}{6} = \frac{-6}{6} = -1$$

2 solutions

$x = 5/3 \quad x = -1$

F 12: p 393 6-13, 23-30

M 13: KUTA Quad Form 1 pink Any 10

T 14: KUTA QF 2 1-10

W Quiz! (Monday)

Th Review Ch 9 Test Due By May 4

F Study (May 1)