

PLAY W/ THE SIGNS...

$$\left. \begin{aligned} d &= \alpha - \beta \\ p &= \alpha \cdot \beta \end{aligned} \right\} \begin{aligned} \alpha, \beta &= \text{roots of} \\ f(x) &= ax^2 + bx + c. \end{aligned}$$

if you know the diff. of roots rather than the sum, what is that equivalent to?

1)  $f(x) = ax^2 + bx + c \neq g(x)$

2)  $g(x) = a(x^2 + dx - p) = a(x + \alpha)(x - \beta)$

th same a as in the std. form.



$g(x)$  maps to another form that differs on the sign of one of the roots, here  $\alpha$

$$\neq a(x - \alpha)(x - \beta) = f(x)$$

$$\neq a(x^2 - sx + p) = f(x)$$

$\therefore$  The roots of  $f(x)$  are:  $\alpha \neq \beta$ .  
 $\therefore$   $-||- -||- g(x)$  are:  $-\alpha \neq \beta$  } they share one root  $\beta$ .