Note Title 07/11/2017

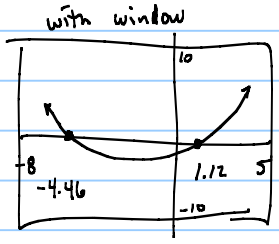
I Solve for the zeros by graphing, no calculator

$y = x^2 - 2x - 3$

II Solve for the zeros by graphing WITH a calculator

nearest 100th & quick sketch with window

$\frac{x^2}{5} + \frac{2x}{3} - 1 = 0$



III Solve for m by factoring:

$9m^2 + 6m = 8$

messy trinomial

$9m^2 + 6m - 8 = 0$ $\quad a \times c = 9 \cdot -8 = -72$

$b = 6$

-6 & 12

$9m^2 - 6m + 12m - 8 = 0$

$3m(3m-2) + 4(3m-2)$

$(3m+4)(3m-2)$ → results are $-\frac{4}{3}$ & $\frac{2}{3}$

IV Solve by completing the square:

$x^2 + 2x - 2 = 0$ Exact roots

$x^2 + 2x = 2$

$x^2 + 2x + 1 = 2 + 1$

$(x+1)^2 = 3$

$\sqrt{(x+1)^2} = \pm\sqrt{3}$

$x + 1 = \pm\sqrt{3}$

$x = -1 \pm \sqrt{3}$

V Use quadratic eqn to solve for x as exact roots

$2x^2 - 3x + 9 = 0$ $\quad x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Discriminant $b^2 - 4ac$

$(-3)^2 - 4(2)(9)$

$D < 0$ $\quad -63$

no roots

$D = 0$ 1 root

$D > 0$ 2 roots.

DO YOUR REVIEW DAY