

4.1 Solving Polynomial Equations PART 2



Math Learning Target:

"By the end of class, I can solve any polynomial equation."

Ex. 1: Use graphing technology ([desmos](#) or [GeoGebra](#)) to solve, to the nearest hundredth.

$$21x^3 - 58x^2 + 10 = -18x^4 - 51x$$

$$\text{Let } f(x) = 21x^3 - 58x^2 + 10$$

$$g(x) = -18x^4 - 51x$$

Method 1

OR

Method 2

$$f(x) = g(x)$$

Find the point(s) where these two functions intersect.

$$\text{Create 1 function: } h(x) = f(x) - g(x)$$

Find the zeros of this new function;
i.e. $h(x) = 0$

Confirm with Desmos File, then show using GeoGebra.

Entertainment: p. 204 # *8ac, 7b, 9c, 10, 11**, 13, 15, 16***, 18

* do #8 first

** $x \in W$ means

x is a Whole number $W = \{0, 1, 2, 3, \dots\}$

*** wrong answer in back: it should be $x=5$, $x=-2$ and $x=-3$