

Nov. 1, 2018

Sect. 7-1

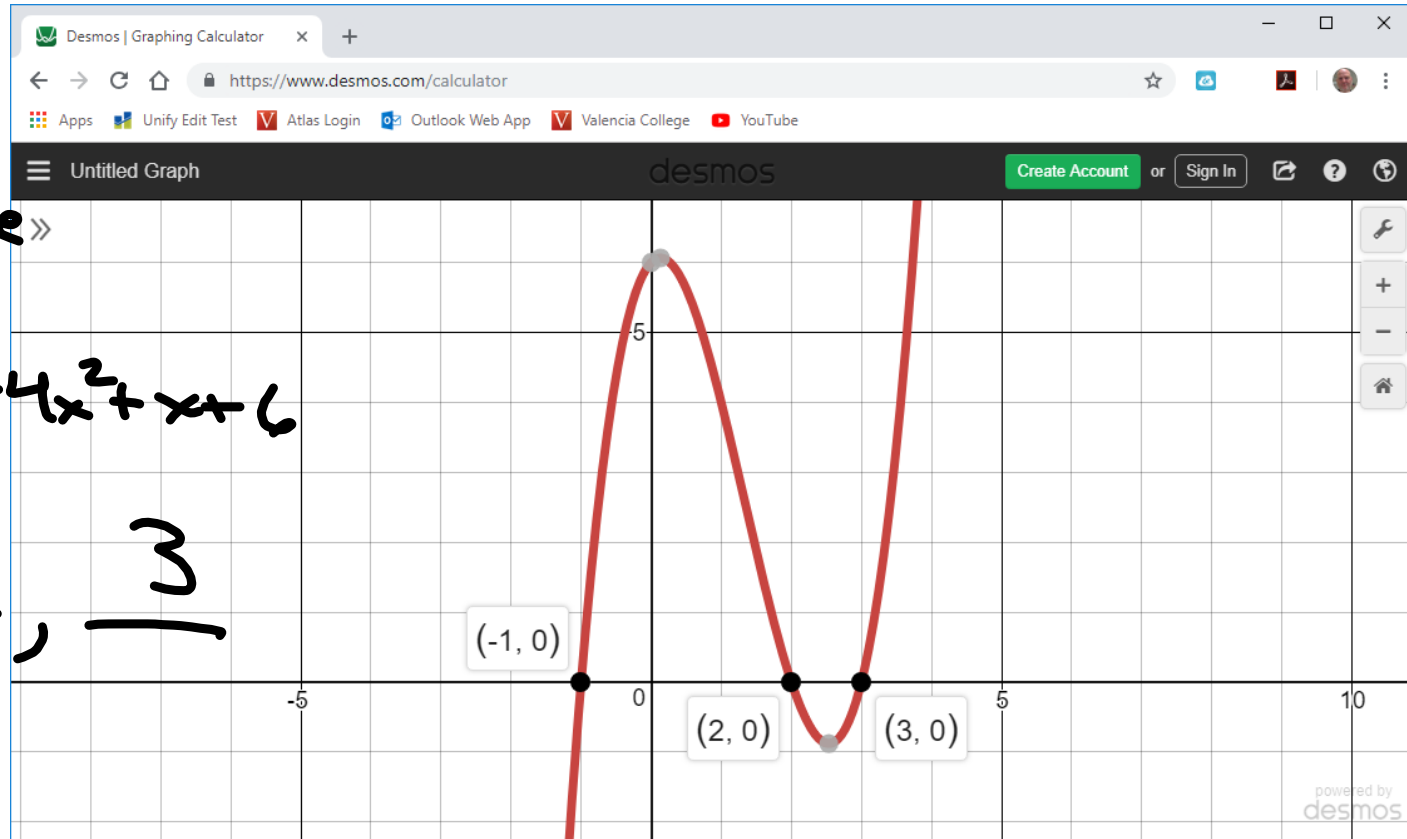
Poly. Funct. of Higher Degree

Roots

Max/Min

Other Roots

Find the roots:
 $f(x) = x^3 - 4x^2 + x + 6$
 $= 1, 2, 3$



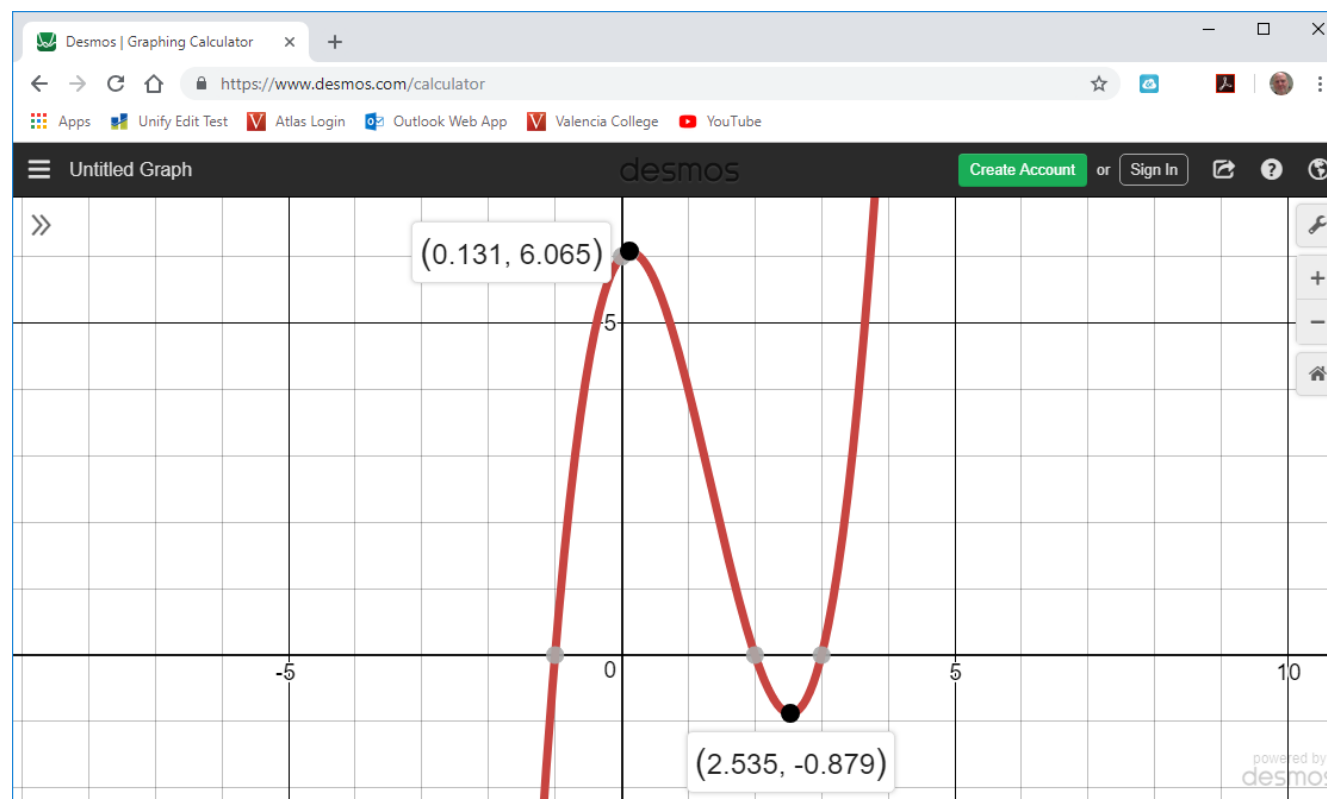
Max/Min

Local max

6.065

Local min

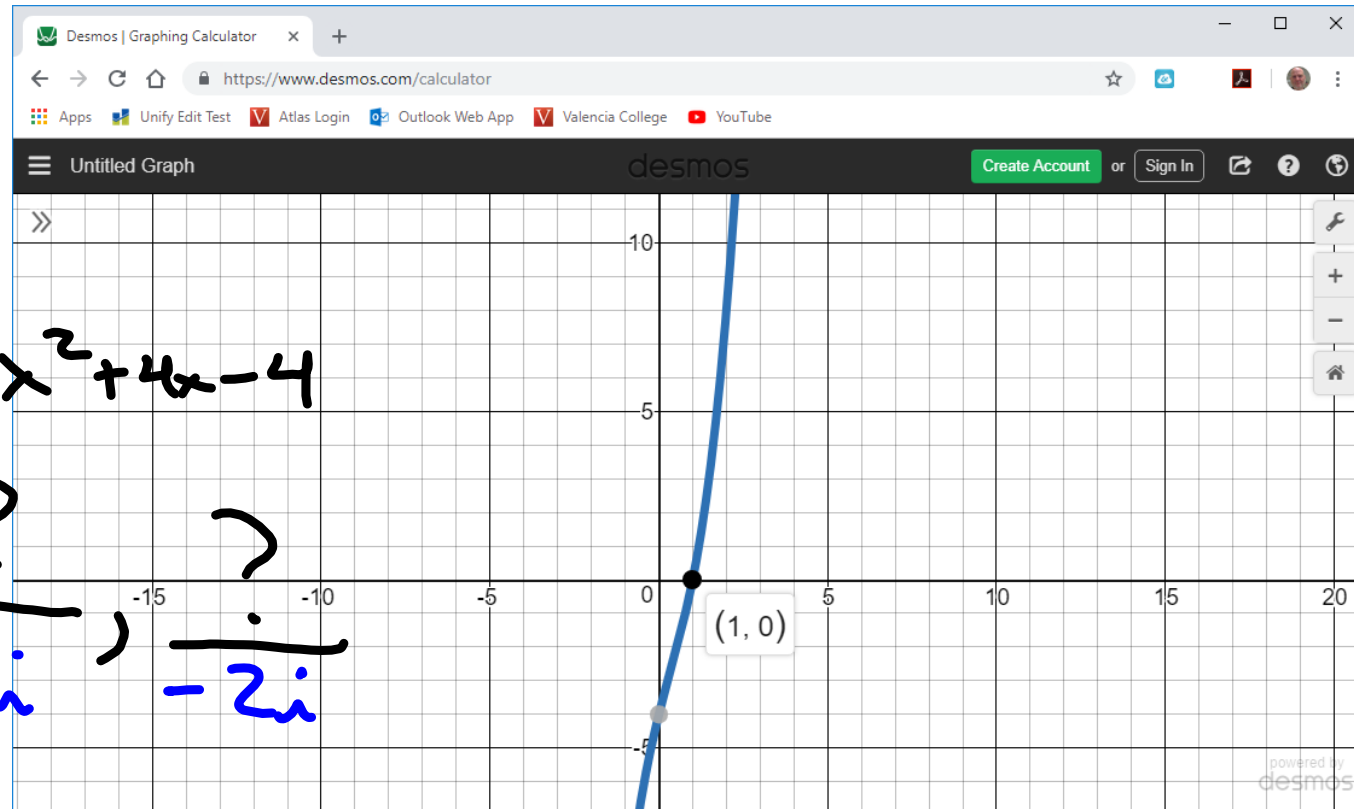
-0.879



Find the
roots

$$f(x) = x^3 - x^2 + 4x - 4$$

$$1, \frac{?}{2i}, \frac{?}{-2i}$$



Find the other two
 $f(x) = x^3 - x^2 + 4x - 4$

$$\begin{array}{r|rrrr} 1 & 1 & -1 & 4 & -4 \\ & \downarrow & & \downarrow & \\ & 1 & 0 & 4 & 0 \\ \hline & 1 & 0 & 4 & 0 \end{array}$$

$x^2 + 0x + 4$

$$x^2 + 4 = 0$$

$$x^2 = -4$$

$$x = \pm 2i$$