

Daily Agenda

Learning Target:
I can use Factor Theorem, Multiplicity of Zeros, and End Behavior to sketch the graph of a polynomial.

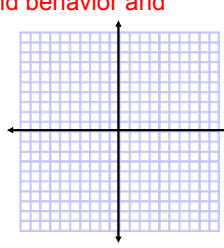
Homework	Assessments
4.1 to 4.4 Worksheet <i>4.4 WS</i>	4.1 to 4.4 Quiz 11/4 Unit 4 Test 11/14

Collect Collect

Life is either a daring adventure or nothing.
-Helen Keller

Nov 15-8:24 PM

Sketch the graph of the given function. Include the y-intercept, x-intercept(s), end behavior and multiplicity.

$$f(x) = x^4 + 4x^3 - 3x^2 - 14x - 8$$


Jan 9-9:21 AM

Rational Root Theorem
(ax-b) is a factor of P(x) if and only if P(b/a)=0

Factors of Constant
Factors of L.C.

$f(x) = 2x^3 + x^2 - x + 6$
 $\frac{\pm 1, 2, 3, 6}{\pm 1, 2} = \pm 1, 2, 3, 6, \frac{1}{2}, \frac{3}{2}$

- Substitute for x
- If P(b/a)=0, then (ax-b) is a factor
- Use **long division** to "depress" the equation and factor completely

Nov 15-8:30 PM

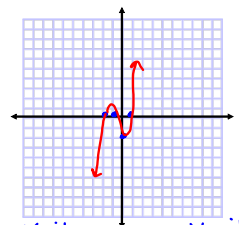
Sketch the graph of the given function. Include the y-intercept, x-intercept(s), end behavior and multiplicity.

$$f(x) = 2x^3 + 5x^2 + x - 2$$

$\frac{\pm 1, 2}{\pm 1, 2} = \pm 1, 2, \frac{1}{2}$

-1	2	5	1	-2
	↓	-2	-3	2
	2	3	-2	0

$(x+1)(2x^2+3x-2)$
 $(x+1)(2x-1)(x+2)$



x-int (-1, 0) (1/2, 0) (-2, 0)
y-int (0, -2)
all cross

Jan 6-8:24 AM

$$6x^2 - 7x - 20$$

$$(3x + 4)(2x - 5)$$

Nov 3-11:28 AM

$2x + 54x^4$
 $2x(1 + 27x^3)$
 $2x \left(\underset{a}{1}^3 + \underset{b}{(3x)^3} \right)$
 $2x(1 + 3x)(1 - 3x + 9x^2)$

$x^5 - 64x^2$
 $x^2(x^3 - 64)$
 $x^2((x)^3 - (4)^3)$
 $x^2(x-4)(x^2+4x+16)$
 $(a-b)(a^2+ab+b^2)$

Nov 3-11:35 AM