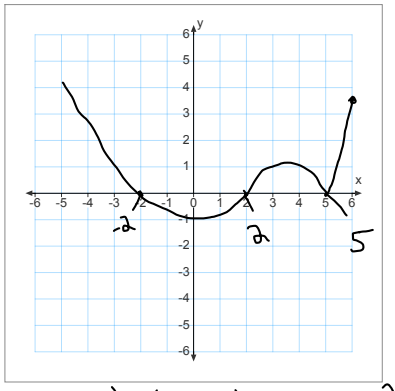
Write an equation in standard form:



$(x+2)(x-2)(x-5)^2$

$[(x+2)(x-2)](x-5)(x-5)$

$x^2-5x-5x+25$

$(x^2-4)(x^2-10x+25)$

$x^2-10x+25$

$x^4-10x^3+25x^2-4x^2+40x-100$

$x^4-10x^3+21x^2+40x-100$

Apr 6-9:13 AM

$f(x)=x^3-6x^2-7x+60$

$(x+3)$ $x+3=0$, $x=-3$

Given that (-3, 0) is an intercept?

d: 3 → odd

LC: 1 +

	1	-6	-7	60
x=-3		0	-3	27	-60
-3	1	-9	20.	0

$x^2-9x+20$ (-5, -4, 1, 10, 120)

$(x-4)(x-5)$

$x=4$ $x=5$

$0=x^2-9x+20$

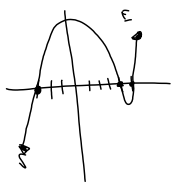
$x=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$

$x=\frac{9\pm\sqrt{9^2-4(1)(2}}{2(1)}$

$x=\frac{9\pm\sqrt{1}}{2}$

$x=\frac{9\pm1}{2}$

$x=5$ $x=4$



Apr 5-10:06 AM

$f(x) = x^3 - 7x^2 - x + 7$

Sketch a graph given (-1,0) is an x-intercept

(x+1)

	1	-7	-1	7
		-1	8	-7
-1	1	-8	7	0

$x^2 - 8x + 7$

$(x-1)(x-7)$

$x = 1 \quad x = 7$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

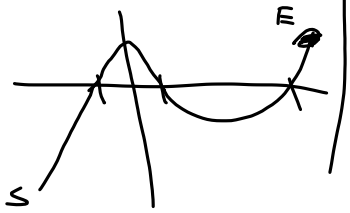
$a = 1$
$b = -8$
$c = 7$

$x = \frac{8 \pm \sqrt{(-8)^2 - 4(1)(7)}}{2(1)}$

$x = \frac{8 \pm \sqrt{36}}{2}$

$x = \frac{8 \pm 6}{2}$

$x = 1$



Apr 5-10:09 AM

Sketch a Graph of the equation:

$f(x) = -(x-3)(x-1)^2(x+7)$

D: 4-even
LC: -1-

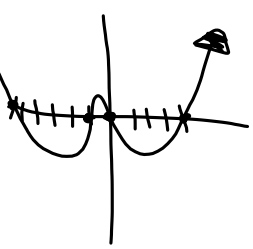
Int: (3,0)
(1,0) -2:
(-7,0)

$y = 3x(x-5)(x+6)(x+1)$

D: 4-even
LC: 3-+

$3x = 0$
$x = 0$

Int:
(5,0)
(-6,0)
(-1,0)
(0,0)



Apr 10-7:31 AM

Knowing (2,0) is an intercept sketch a graph of the function below

$$y = x^3 - 2x^2 - 4x + 8$$

1 −2 −4 8

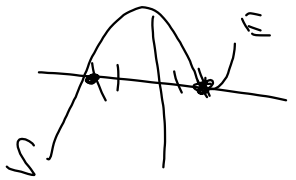
2 | 1 0 −4 0

$x^2 + 0x - 4$

$(x+2)(x-2)$

$-2 \quad +2$

$(-2,0) \quad (2,0) \quad -2$



Jan 18-8:35 PM

Sketch a graph:

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

Given (x - 4) is a factor.

D: 3−2d(

LC: 1 − +

x − 4 = 0, +4 +4, x = 4

1 −1 −14 8

4 12 −8

4 | 1 3 −2 0

$0 = x^2 + 3x - 2$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$a = 1$, $b = 3$, $c = -2$

$x = \frac{-3 \pm \sqrt{3^2 - 4(1)(-2)}}{2(1)}$

$x = \frac{-3 \pm \sqrt{17}}{2}$

$x = \frac{-3 \pm 4.12}{2}$

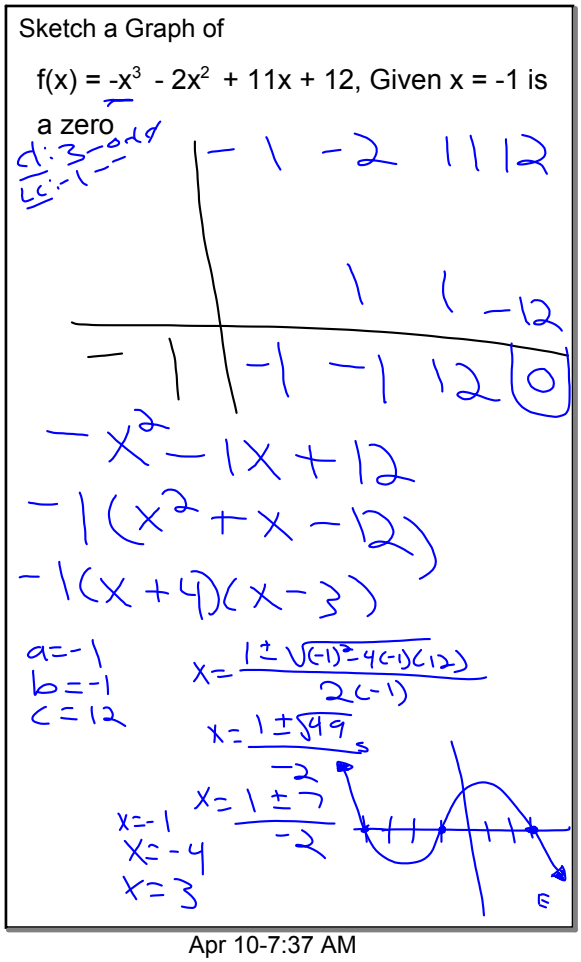
$x = \frac{-3 + 4.12}{2}$ $\quad x = \frac{-3 - 4.12}{2}$

$x = .5$ $\quad x = -3.5$ $\quad x = 4$

Apr 10-7:47 AM

Sketch a Graph of

$f(x) = -x^3 - 2x^2 + 11x + 12$, Given x = -1 is a zero



Apr 10-7:37 AM

STEPS for Graphing

1. Describe the end behavior (make a quick sketch)
2. Make a table of values with 5 find the x-intercepts
3. Plot the x intercepts and end behavior
4. Connect the End Behavior with the x-intercepts

Jan 16-5:47 PM