

Sec 3.2.3

Summary and previous material

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

Use LCT to determine end behavior

Find the x-intercepts and state whether the graph touches or turns

Find the y-intercept

Sketch the function...

$$(x^3 + x^2) + (-4x - 4) = 0$$

Let $x=0$
y-int
@ -4

$$x^2(x+1) - 4(x+1) = 0$$

$$(x+1)(x^2 - 4) = 0$$

(x+2)(x-2)

$$x = \{-2, -1, 2\}$$

CROSS CROSS CROSS

Plot intercepts
points between x-intercepts
use end behavior...

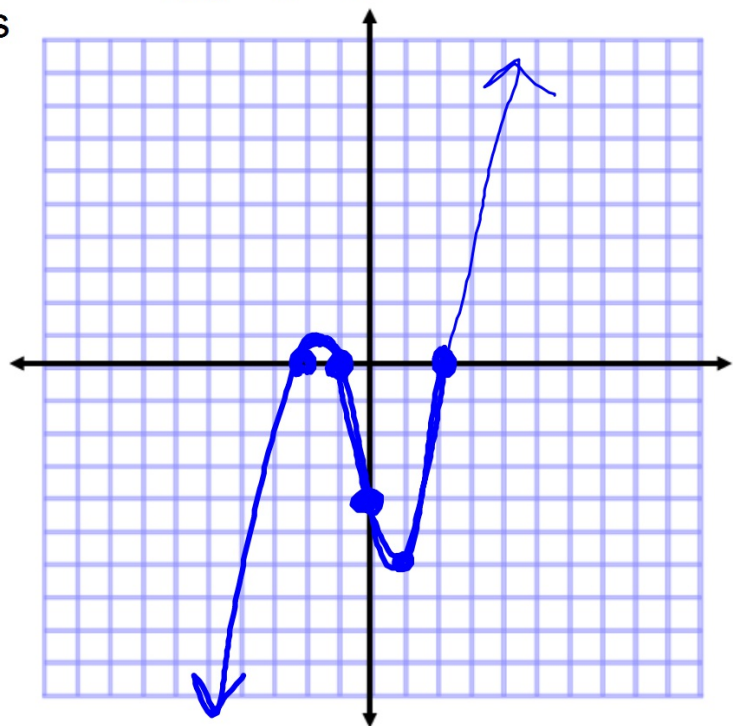
y-int @ -4

x-ints $\rightarrow \pm 2, -1$

↙ ↗

x	y
-1.5	0.87
1	-6

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



Given $f(x) = -2(x-4)^2(x^2-25)$

Use LCT to determine end behavior. $-2x^4$

Find x-intercepts and determine behavior there.

Find the y-intercept

Sketch.

$x = \{4, \pm 5\}$

turns cross

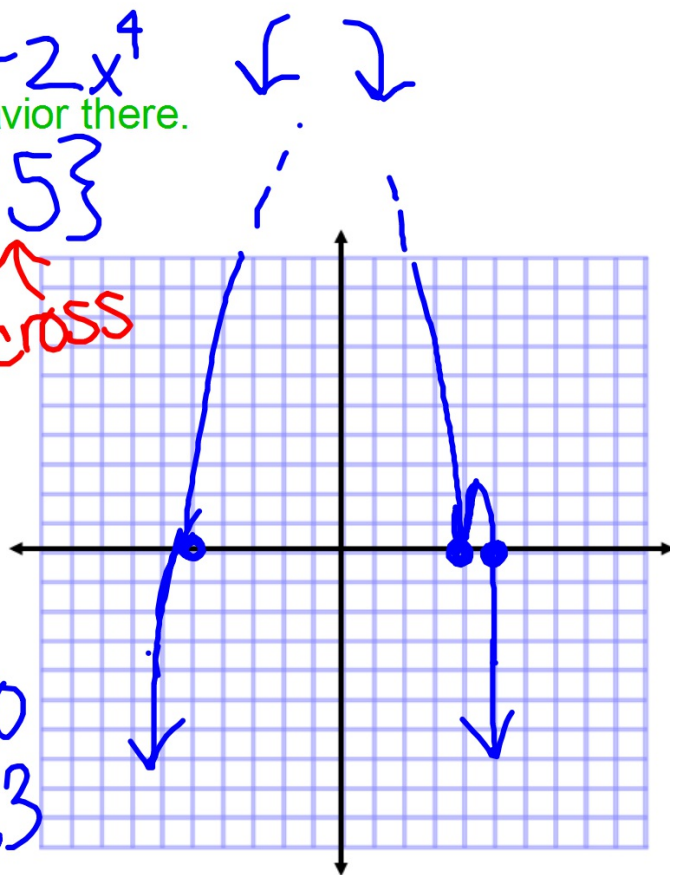
Let $x=0$

$$= -2(-4)^2(-25)$$

$$= -2(16)(-25)$$

$$= 800$$

x	y
0	800
4.5	2.3



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Suggested Practice-
41-57 odd

* there are several variations in the
polynomials...it will be wise to try one
of each

All are odd numbers...
check solutions and graph in
the back of my text.
AA25-AA26
Photo will be on website, too.

