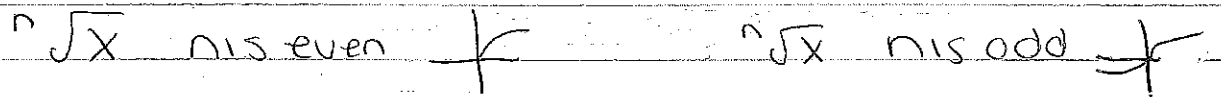
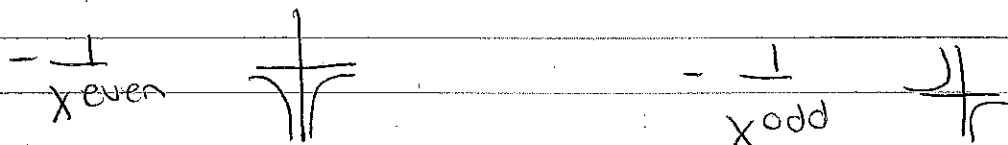
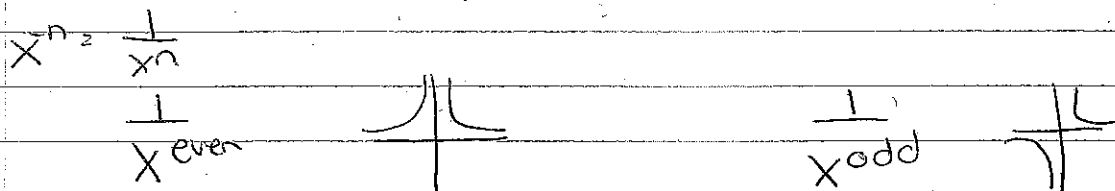
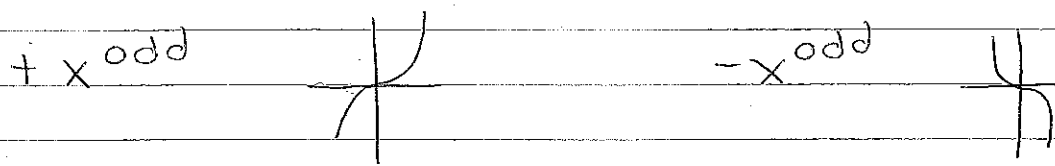


Ch. 2.1-2.3 Highlights

Leading term test for end behavior



For all: Domain

Range

Intercepts:

end behavior $\lim_{x \rightarrow -\infty} =$

$\lim_{x \rightarrow \infty} =$

Continuity

Increasing/Decreasing

Chapter 2.1 – 2.3 highlights with parts of 1.3

To test for continuity does $f(x)$ exist?

Then see if values on either side go to that same value

X	$c - .1$	$c - .01$	$c - .001$	c	$c + .001$	$c + .01$	$c + .1$
F(x)				$f(c)$			

Types of discontinuity

Infinite discontinuity

Jump Discontinuity

See leading term test informational page

Solving radical equations

- Isolate the radical expression
- Raise each side to the power needed to eliminate the radical
- Solve
- Check for extraneous roots

X^n has at most n real roots and at most $n-1$ turns

Solutions = roots = zeros = $x =$

Graphing

- Use leading term test to find the end behavior
- Determine the number of real roots and the number of turns
- Find the zeros and state multiplicity
- If Multiplicity = odd, graph crosses at that point, If Multiplicity = even, graph is tangent at that point.
- Find more points using chart or graphing calculator
- Graph noting O 's!

Long division ($x - 4$)

Synthetic division ($x - 4$) = 0, $x = 4$

Remainder theorem $f(c) = \text{remainder}$

Factor theorem $f(c) = 0$, c is a factor