

Calc 12 - Chp 2-4 Final Review.

Note Title

2015-05-29

Limits - use Limit Laws to break expressions into terms.

- for limits at ∞ , divide by highest power because $1/x^p$ will go to zero.
- for two-sided limits (piecewise, asymptotes) left must equal right for the full limit to exist.
- Sandwich Theorem.
- determining asymptotes, end behaviour
- continuity & types
- Intermediate Value Theorem.
- tangent lines

Derivatives - limit definition

- have/memorize your tables: power, trig, reciprocal trig, inverse trig, exponential, logs
- sum, product, quotient, chain rules.
- graphically determine curves by looking at zeros, min, max.
- smoothness
- IVT for derivatives.
- implicit differentiation. (\neq second deriv)

- Local/Abs Min/Max: how to find
- Extreme Value Theorem:
- Critical Points
- Mean Value Theorem.
- Increasing / Decreasing Fns.
- Concavity
- First and Second Derivative Tests.
- Curve Sketching

- Word Problems.
 - drawing
 - min/max
 - units.
 - turn sentences into equations.
- linearization & NM.
- Differentials & % -age error
- Related Rates.

