Review Sheet

- intervals of increasing/decreasing and concave up/down (with derivatives and geometrically).
  critical points and local/absolute max/min.
- mean value theorem. (INCAR) (there is a point in time when you're traveling at your average speed)
- horizontal and vertical asymptotes. /using that info to match a sketch to a function.
- optimization.
- related rates.
- calculating integrals by finding area. • antiderivatives.
- Riemann sum.
- Fundamental Theorem of Calculus.
- average value of a function/ mean value for integrals.
- substitution.
- series (when does it converge?).
- differential equations:
  1) set up the Diffeq. eg. "in proportion to" (Newton's/exp pop/½ life)
  2) matching slope field.
  3) solving separable differential equations, finding the solution through a given point.
- area between curves and integrating with respect to y.
- washer method.
- cylindrical shells.
- cross sections.

  } - draw pictures
  - volume of a slice.
  - set up integral.

- arc-length
- definition of work. work = force x distance, can be interpreted as an integral.