**Worksheets:  MATH 161**



[Worksheet I](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws1.pdf)(review of graphing polynomials and rational functions; trig functions; logarithmic functions; inverse functions; odd & even functions)]

[Worksheet II](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws2.pdf)(limits, continuity, *Intermediate Value Theorem, Sandwich Theorem*)

[Worksheet III](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws3.pdf) (average rate of change)

[Worksheet IV](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws3.pdf) (interpreting the derivative)

[Worksheet V](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws5.pdf) (trigonometric limits)

[Worksheet VI](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws6.pdf) (short cuts: including product and quotient rules)

[Worksheet VII](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws7.pdf) (higher-order derivatives)

[Worksheet VIII](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws8.pdf) (curve sketching: a prelude; *Extreme Value Theorem*)

[Worksheet IX](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws9.pdf) (linearization)

[Worksheet X](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws10.pdf) (chain rule; implicit differentiation; logarithmic differentiation; inverse trig functions)

[Worksheet XI](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws11.pdf) (related rates)

[Worksheet XII](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws12.pdf) (curve sketching; concavity)

[Worksheet XIII](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws13.pdf) (hyperbolic functions)

[Worksheet XIV](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws14.pdf) (optimization)

[Worksheet XV](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws15.pdf) (introduction to area and Riemann sums)

[Worksheet XVI](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws16.pdf) (MVT, Anti-derivatives, Indefinite integrals & initial value problems)

[Worksheet XVII](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws17.pdf) (the Riemann integral)

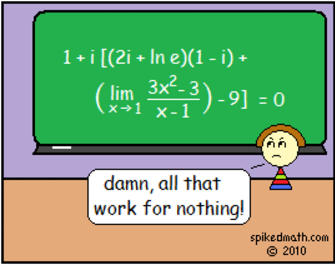
[Worksheet XVIII](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws18.pdf) (the FTC, the Net Change Theorem)

[Worksheet XIX](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws19.pdf) (area between curves)

[Worksheet XX](http://www.math.luc.edu/~ajs/courses/161fall2017/worksheets/ws20.pdf) (l’Hôpital’s rule)

*Work!  God wills it.  That, it seems to me, is clear.*

- Gustave Flaubert  (letter to Louise Colet, 1845)



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