The exam will be in class on Friday (September 30), in this room. It will be fifty minutes long and there are eight questions on the exam.

You are allowed a calculator (see website for allowed calculators). Other than that, only pens/pencils and **blank** paper.

Review

Here's a brief list of topics that we've covered:

• Functions, graphs of functions.

• Linear functions, slope, point-slope form, slope-intercept form.

• Functional models (= 'word problems', for our purposes)

• Limits.

Also: one-sided limits, limits as x approaches infinity, limits where the function approaches infinity...

- Continuity of functions.

- Differentiation:

- The definition with a limit.

- The rules for finding derivatives with formulae (power rule, product rule, chain rule, etc.)

- The slope and equation of the tangent line.

- Estimating change in function using the derivative (marginal analysis)

- Implicit differentiation.

- Increase and decrease of functions on intervals (critical numbers, first and second derivative tests)

- Concavity, points of inflection.

- Curve sketching. (All of the above, plus asymptotes...)

- Optimization (finding maximum and minimum values of functions). Elasticity of demand.

Any questions?