

This computer-administered exam consists of ten items, with at least eight correct answers required for a pass. The exam is administered through the WeBWorK system, with easiest access coming through the “Gateway Exam” link in the left sidebar on the course web page (Google for “jon’s central” and follow the Fall 2012 Calc 1 link). The exam allows 60 minutes, but if you come prepared time should not be a major factor.

The exam selects questions at random from ten pools, but will always include:

- At least one Product Rule and one Quotient Rule problem (see 7-26 in §3.3 for practice)
- At least one Chain Rule problem (see 7-30 and 33-44 in §3.6 for practice)
- At least one question over derivatives of basic and reciprocal trig functions (see the box on page 159 for review)
- At least one question involving the derivative of an inverse trig function be sure to know the derivatives of  $\sin^{-1} x$  and  $\tan^{-1} x$ )
- At least one problem involving use of both the Product and Quotient Rules (see 49-52 in §3.3 for practice)
- At least one problem involving use of both the Product and Chain Rules and at least one problem involving use of both the Quotient and Chain Rules (see 25-28 in the Chapter 3 Review for practice)
- At least one problem involving a second derivative
- At least one problem involving the derivative of a function given implicitly (see 11-18 in §3.7 for practice)

A few tips and points of information:

- ◆ Don’t make these harder than they are.
- ◆ Calculators such as the TI-89, which perform symbolic differentiation, are not allowed for this gateway exam.
- ◆ Scratch paper is available – just ask.
- ◆ No consultation with other resources, human, online, or otherwise, is allowed while taking the gateway exam.
- ◆ The gateway exam can only be taken under the supervision of a proctor. All faculty in the Department of Mathematical Sciences, as well as the Undergraduate Assistants who staff the evening Math Help Sessions, are authorized to proctor.
- ◆ Only the three computers in the Lindsay Lounge will normally be used for proctoring the gateway exams, so plan to do it early or plan to wait in line.

