

# Maple Competency Quiz I (Version C)

**Objective** To assess your ability to perform some of the fundamentalals of Maple, as introduced in the labs for the first half of this course.

**Directions**

- Prepare a Word document, or Maple worksheet, containing the answers to the following questions.
- Be sure to clearly label your work, and delete all extraneous work that is not relevant to your final answers.

## Questions

- (1) What is the URL of the website for all of the Math 141 Labs?
- (2) Find the four (4) errors in the Maple command  

```
> f(x) := t -> sin*(5x);
```
- (3) Plot  $f(x) = x^{\sin x}$ , and its derivative, on  $[0, 4]$ . Be sure your plot has a legend and uses different linestyles to distinguish the two curves.
- (4) What is the second digit to the right of the decimal point in the second derivative of  $f(x)$  (defined in 3) at  $x = 2$ ?
- (5) Let  $g(x) = \frac{x^3 + x^2 - x + 2}{x^2 + 5x + 6}$ . Which discontinuities of  $g(x)$  are removable? Which discontinuities of  $g(x)$  are not removable?
- (6) What Maple command will solve  $c + 5x - \frac{1}{c} = c^2$  for  $c$  (in terms of  $x$ )?