Some Interface Issues

- Maple 10 can be *very* slow to open, but once it's ready, it's an incredibly powerful and very cool tool.

  There are two different interfaces for Maple. I think it's clearest to use the Worksheet Mode, which is the default on the machines in room A102. The mode can be changed under the menu option

  Tools – **Options** – **Interface** on Windows machines, or
  Maple 10 – **Preferences** – **Interface** on Mac OS machines

- The palettes on the left can be very handy for providing templates for Maple's syntax.
  The **Expression** and **Common Symbols** palettes will be especially useful for Calculus I.
- The **Help** menu is your friend. Use it to find the exact syntax and options for the commands.
- There are a few things about Maple's syntax that might drive you crazy:
  - Every line must end with a semi-colon.
  - Always include the `*` for multiplication, like `3*(x+y)` for $3(x+y)$.
  - Maple is case-sensitive: `plot` is **not** the same as `Plot`.

The Commands You'll Need for this Semester

`plot(sin(x), x=-2..Pi);`	Plots $\sin(x)$ for $-2 \le x \le \pi$
`plot([x^2, sin(x)], x=-2..Pi);`	Plots the two functions x^2 and $\sin(x)$ for$-2 \le x \le \pi$ on the same set of axes
`sqrt(42+x)`	Just as you expect, this is $\sqrt{42+x}$
`Pi`	The constant π. Notice the *capital P*
`exp(x)`	The natural exponential function e^x To get the constant e, you use `exp(1)`
`simplify( );`	Attempts to algebraically simplify an expression
`solve(x^2+6x-5=0);`	Tries to solve the equation *exactly* without decimal approximation
`Diff(cos(x^2)*tan(x), x);`	The inert form of the differentiation function.
`Int(cos(x^2)*x^2, x);`	The inert form of the antidifferentiation function. The advantage of the inert form is that you can check if
`value( );`	The *exact* value of an expression. You can combine this with the `Diff( )` or `Int( )` commands to find a value.
`evalf( );`	A numeric approximation of a value
`w := x^2;`	Defines w to be the expression x^2 Whenever Maple sees `w`, it will substitute x^2
`unassign('w');`	Unassigns w
`f := x -> x^3 + cos(x);`	Defines a *function* $f(x) = x^3 + \cos(x)$ Then $f(Pi)$ would be $\pi^3 + \cos(\pi)$
`<cntrl>-L`	This lets you input a label to the output from a previous statement.
`<cmd>-L`	This is handy to use the output without retyping an expression. `<cntrl>-L` is for Windows machines and `<cmd>-L` is for Macs.
`restart;`	Clears all definitions and reinitializes Maple