

# MAPLE ASSIGNMENT,

# MATH 266

First, type some text. (To insert text material in a MAPLE worksheet, just click on the "Text" box at the top of the window or select "Insert Text" from the Edit menu. To switch back to MAPLE command "Input" mode, select "Insert Prompt" from the Edit menu.)

Next, get a prompt and type a couple of your favorite commands. Something like this:

```
> diff( x^2 * exp(x) * sin(x) , x ) ;
```

$$2x e^x \sin(x) + x^2 e^x \sin(x) + x^2 e^x \cos(x)$$

```
> Int(x^2 * sin(x) , x ) = int(x^2 * sin(x) , x ) + C;
```

$$\int x^2 \sin(x) dx = -x^2 \cos(x) + 2 \cos(x) + 2x \sin(x) + C$$

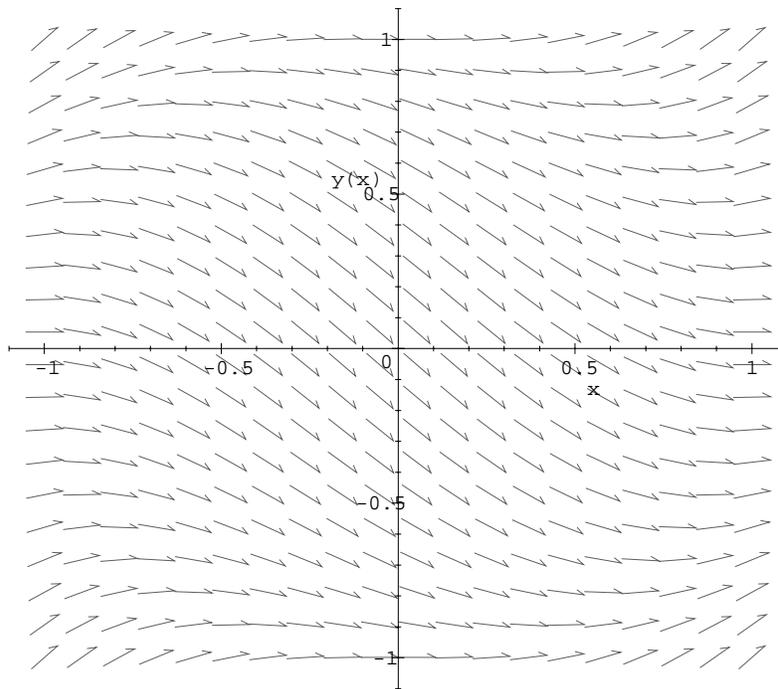
```
> plot( exp(-x) * cos(5*x) , x = 0..2);
```

Paste the graph you get from your plot statement into the worksheet (by selecting "Copy" from the Edit menu of the graph window, then clicking the (left) mouse at the point in the worksheet where you want the graph to be pasted, then selecting "Paste" from the Edit menu of the worksheet.) Next, type the following three commands.

```
> with(DEtools);
```

```
> ODE := diff( y(x) , x ) = x^2 + y(x)^2 - 1 ;
```

```
> dfieldplot( ODE , y(x) , x=-1..1 , y=-1..1 ) ;
```



Paste the resulting direction field into the worksheet and print the whole thing. (To print a worksheet, select "Print" from the File menu. When the Print dialogue box pops up, select "Print to lp" by clicking the second diamond from the top.) Finally, draw in by hand a

solution curve on the direction field that passes through the origin.