**Calc 3 - Maple 1**

In class we discussed several Maple commands to visualize functions of two variables, sheets, implicitly defined functions, and vector-valued functions:

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| --- | --- |
| **with(plots)** | Loads additional plot commands |
| **plot3d(f(x,y), x=A..B, y=C..D)** | Draws a surface in 3D |
| **implicitplot3d(f(x,y,z)=c, x=A..B, y=C..D, z=E..F)** | Draws an implicitly defined function |
| **plot([x(t), y(t), t=A..B], x=C..D, y=E..F)** | Draws a 2D space curve |
| **spacecurve([x(t),y(t),z(t)], t=A..B)** | Draws a 3D space curve |
| **tubeplot([x(t), y(t), z(t)], t=A..B)** | Draws a tube around a 3D space curve |

Complete the following assignments in Maple. Save your Maple worksheet or copy-and-paste your graphs into a Word document. Submit the document as an email attachment to me.

1. Use the appropriate plot command to visualize the following functions:

Right-click on your plot to add axes to your picture and rotate it so that the primary features of the graph show up nicely.

1. As a late Valentine’s Day special, draw the 2D space curve

as *t* goes from -1 to 1.

**Bonus:** To see what else Maple can do, execute the following command. Do you know the name of the object?

