

This assignment is intended to help you visualize surface plots and contour plots. As an example, to draw a surface plot and contour plot for $f(x,y) = (\sin x)(\sin y)$ over the rectangle $[0,6\pi]$ by $[0,4\pi]$ you may enter:

```
f[x_,y_] := Sin[x] * Sin[y];  
Plot3D[f[x,y], {x, 0, 6 Pi}, {y, 0, 4Pi}]  
ContourPlot[f[x,y], {x, 0, 6 Pi}, {y, 0, 4Pi}]
```

(You are primarily using the new commands `Plot3D[]` and `ContourPlot[]`; you can get information about these commands, for instance, by simply entering in a cell “`?Plot3D`”.)

For your assignment, upload to the Digital Dropbox (in Knightvision, for this course) a .pdf copy of a Mathematica notebook in which you draw surface plots and contour plots for the problems listed below. Your plots should be over regions (rectangles!) large enough to capture what the function is doing.

Section 11.1#37-40,54

Please use a simple filename for the file that you upload (perhaps `math.pdf`, just try to avoid extra punctuation). I will be able to tell that it came from you!