Getting XY points to 0-360 degree points (no background, or thresholds)

Step 1: Get data- you will need (1) the XY coordinates of your cells, (2) the XY coordinates of two points on a line that is the 0----180 line on your crosshairs, (3) two points on a line that is the 90----270 on your crosshairs (note that you do not need to worry about having a perfect 90 degree angle for your crosshairs, the important part is that the intersection is where you want the middle)

Step 2: Arrange your data into an excel file so that:

Column 1 = X coordinates of labeled cells (you’ll have as many rows as you do cells)

Column 2 = Y coordinates of labeled cells

Columns 3 & 4, Row 1 = X & Y coordinates for a point on the line corresponding to the

0/360⁰ direction (can be anywhere on the line)

Columns 3 & 4, Row 2 = X&Y coordinates for a point on the line corresponding to the

180⁰ direction

Columns 3 & 4, Row 3 = X&Y coordinates for a point on the line corresponding to the

90⁰ direction

Columns 3 & 4, Row 4 = Y coordinate for a point on the line corresponding to the

270⁰ direction

Step 3: Save your excel file, open matlab, in command line, type:

XYto360

\*\*the XYto360.m file is the only matlab file you need

You will be prompted to select your excel file from wherever you saved it. You may have to choose “All files” from the drop menu, since it’s looking for .mat files by default. Select your file.

Step 4: Check your results

After the program runs, it saves another excel file in the location your original file. It is named degrees\_yourfile.xlsx. It contains the degrees of your original points in the same order you had them. Two figures open in matlab. Figure 1 is the original data points with the crosshairs over them. Check to see that 0, 90, 180, and 270 are located in positions you wanted them. In Figure 2 are your data/cells as degrees.