You will use this circle diagram and the chart on the next page for tonight's homework. Detailed instructions are on the next page.

## Supplies Needed:

Straight Edge
Protractor


## Algebra 2 with Trigonometry

I Am:

## Directions:

Your other worksheet for this activity has a diagram showing a circle with a radius of one. There is a 40-degree angle drawn on top of it. Please check now to see that the angle ends at (approximately) the point (0.76, 0.64). We can approximate to the hundredths place from this diagram.
To the right is a table with rows for every angle between 0 and 360 degrees, in increments of ten degrees. In the row for 40 degrees, please fill in 0.76 under the $x$-coordinate, because 0.76 is the $x$-coordinate of the end of the 40-degree angle on the diagram. Also fill in 0.64 under the y-coordinate, because 0.64 is the $y$-coordinate of the end of the 40 -degree angle. Finally, fill in 0.84 under "ratio of $y / x$," because $0.64 / 0.76$ is approximately 0.84 .
Your homework is to fill in the rest of this chart for all 36 of the other angles listed. The coordinates you get will vary as you choose other angles. You will need a protractor to draw angles -please actually draw the angles you need to measure, and do not attempt to estimate angles without a protractor. If you find a logical shortcut, you may use it, please do not look anything up in a book or on the net, all you need is the diagram and the tools listed.

| Angle (degrees) | x-coordinate | $y$-coordinate | ratio of $\mathrm{y} / \mathrm{x}$ |
| :---: | :---: | :---: | :---: |
| 0 |  |  |  |
| 10 |  |  |  |
| 20 |  |  |  |
| 30 |  |  |  |
| 40 |  |  |  |
| 50 |  |  |  |
| 60 |  |  |  |
| 70 |  |  |  |
| 80 |  |  |  |
| 90 |  |  |  |
| 100 |  |  |  |
| 110 |  |  |  |
| 120 |  |  |  |
| 130 |  |  |  |
| 140 |  |  |  |
| 150 |  |  |  |
| 160 |  |  |  |
| 170 |  |  |  |
| 180 |  |  |  |
| 190 |  |  |  |
| 200 |  |  |  |
| 210 |  |  |  |
| 220 |  |  |  |
| 230 |  |  |  |
| 240 |  |  |  |
| 250 |  |  |  |
| 260 |  |  |  |
| 270 |  |  |  |
| 280 |  |  |  |
| 290 |  |  |  |
| 300 |  |  |  |
| 310 |  |  |  |
| 320 |  |  |  |
| 330 |  |  |  |
| 340 |  |  |  |
| 350 |  |  |  |
| 360 |  |  |  |

