Formula Sheet for Conics - Complete using as much detail as possible.

| Midpoint: | Distance: |
| :---: | :---: |
| Point - <br> Formula - | Point - <br> Formula - |
| Circle: | Graph at Origin and Label Center \& Radius |
| Equation - <br> Center - <br> Radius - |  |
| Vertical Ellipse: | Graph at Origin and Label center, a, b, c, Foci, Vertices, CoVertices, Major \& Minor Axis |
| Equation - <br> Center - <br> a - <br> b- <br> c- <br> Pythagorean Rule: |  |
| Horizontal Ellipse: | Graph at Origin and Label center, a, b, c, Foci, Vertices, CoVertices, Major \& Minor Axis |
| Equation - <br> Center - <br> a - <br> b- <br> c- <br> Pythagorean Rule: |  |
| Vertical Hyperbola: | Graph at Origin and Label center, a, b, c, Foci, Vertices, Asymptotes \& Transverse Axis |
| Equation - <br> Center - <br> a - <br> b- <br> c- <br> Equation to Asymptotes: <br> Pythagorean Rule: |  |


| Horizontal Hyperbola: | Graph at Origin and Label center, a, b, c, Foci, Vertices, Asymptotes \& Transverse Axis |
| :---: | :---: |
| Equation - <br> Center - <br> a - <br> b- <br> c- <br> Equation to Asymptotes: <br> Pythagorean Rule: |  |
| Right Parabola: | Graph at Origin and Label, p, LR, Focus, Vertex \& Directrix |
| Equation - <br> Vertex - <br> $p-$ <br> Latus Rectum - <br> Directrix - |  |
| Left Parabola: | Graph at Origin and Label, p, LR, Focus, Vertex \& Directrix |
| Equation - <br> Vertex - <br> $p-$ <br> Latus Rectum - <br> Directrix - |  |
| Up Parabola: | Graph at Origin and Label, p, LR, Focus, Vertex \& Directrix |
| Equation - <br> Vertex - <br> $p-$ <br> Latus Rectum - <br> Directrix - |  |
| Down Parabola: | Graph at Origin and Label, p, LR, Focus, Vertex \& Directrix |
| Equation - <br> Vertex - <br> p- <br> Latus Rectum - <br> Directrix - |  |

