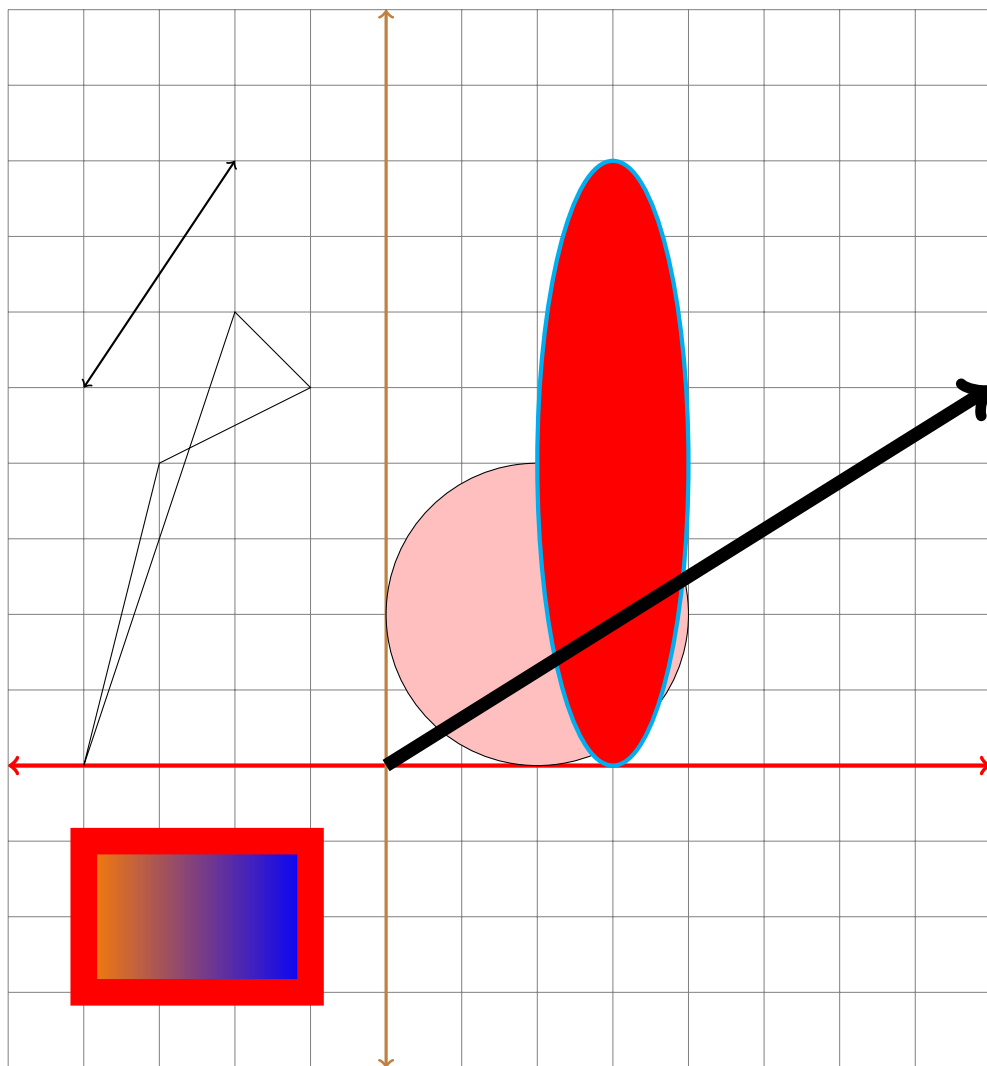Math 291
Lab 9
Due Monday April 15, 2019
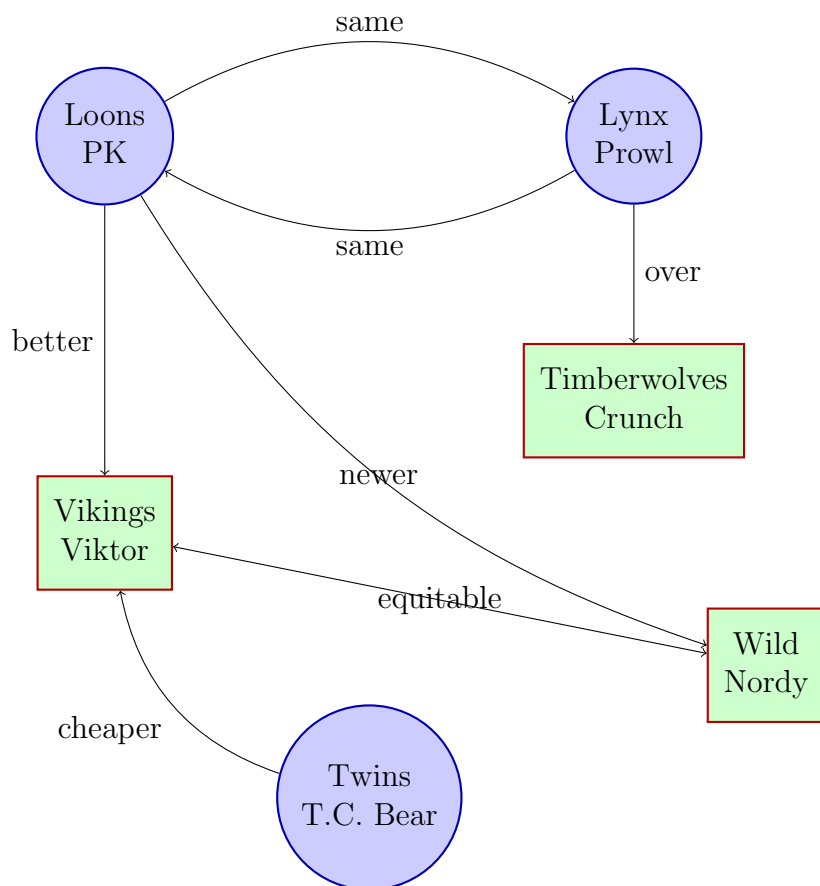
Instructions: Use LaTeX to typeset a document containing each component described below. Turn in your lab in D2L Brightspace. You should submit both your raw TeX (.tex) file and your compiled document. Do *not* submit a .zip file.

You will be graded on both your raw TeX code and the accuracy of your compiled document. **Don't forget to include Lab3 in your filename and include a four-line name block similar to the one you did for earlier labs**. And note that there are three parts to this lab, so look on the next page too.

1. Use ti*k*Z to create the following picture. Make sure that you pay attention to colors, arrows, sizes, order in which items are layered over each other, etc. Note that the red axis and the ellipse are ultra thick, the brown axis is very thick, the ray has a line width of 5 pts, and the rectangle has a line width of 10 pts. Also, the circle is only 25% red. Use the default sizing.

2. Use ti*k*Z to create the following picture. Make sure that you pay attention to colors, arrows, nodes, sizes, etc. Use two styles for creating the nodes. The colors are a 70/30 blue/black mix for the edges with a fill of 20% blue. The other nodes have a color of a 30/70 black/red mix for the edges with a fill of 20% green. Your default unit should be 1.75cm (for both directions). In order to get two lines for the node labels, use a tabular environment.

3. Draw a third picture of your own devising in a single ti*k*Z environment. You need to have at least six commands. Each command can have more than one piece, but you have to use each of the following somewhere at least once: node, edge, circle, cycle, filldraw, shadedraw, grid. You must also include, somewhere, a hexagon (it does not have to be a regular hexagon).