1. For which values of $p$ does the diagram $a$ below have a $p$-labeling?

2. Prove that the Jones polynomial of the $n$-component link $b$ below is $(-A^{-10} - A^{-2})^{n-1}$.

3. Find a linked pair of 3-cycles in the toroidal placement of $K_6$ displayed in Illustration $c$ below.

4. Prove that no $p$-labeling of a knot uses exactly two labels. Is the same true for links?