Name: _____

The following equation represents a ligand association process:

$$P + L \Longleftrightarrow P{:}L$$

1. Define the association equilibrium constant K_A in terms of molar concentrations of products and reactants.

2. What are the units of K_A for this process?

3. When presenting ligand-binding data, researchers often use fractional saturation (θ):

$$\theta = \frac{[P{:}L]}{[P]_{Total}}$$

   a. For this process $[P]_{Total} = [P]_{free} + [P{:}L]$. Rearrange this expression to solve for $[P]_{free}$.

   b. Substitute your expression for $[P]_{free}$ into your equation for the association equilibrium constant expression in #1. Use algebra to solve for θ.

4. Besides UV/Vis spectroscopy, identify a method presented by Pollard that can be used to study ligand binding.

5. What is one question that remains in your mind from reading the Pollard paper?