Calvin AI/ML Handout | *Feb 17, 2025*

Name: _____

Draw a diagram the steps in the forward pass of a multi-class logistic regression model, including the loss computation. i.e., given a batch of samples X, what are the steps to compute the loss for each sample? Make sure you can identify:

- What is the shape of the input (and what does each number in the shape represent)?
- What are the parameters of this model? What are their shapes?
- What math operation is performed by the linear part of the model?
- What the output of the linear part is typically called? What is its shape?
- What nonlinear function is applied? To what array? What is the output of this function is typically called?
- What is the loss function? What inputs does it take? How it is computed?

Before you leave, pick a couple of these questions to react to:

1. What was the most important concept from today for you?
2. What was the muddiest concept today?
3. How does what we did today connect with what you've learned before?
4. What would you like to review or clarify next time we meet?
5. What are you curious, hopeful, or excited about?