1. Which is an example of a classification task? 1 point

- (●) Based on the size of each tumor, determine if each tumor is malignant (cancerous) or not.
- ( ) Based on a patient's blood pressure, determine how much blood pressure medication (a dosage measured in milligrams) the patient should be prescribed.
- ( ) Based on a patient's age and blood pressure, determine how much blood pressure medication (measured in milligrams) the patient should be prescribed.

2. Recall the sigmoid function is $g(z) = \frac{1}{1+e^{-z}}$ 1 point

If z is a large positive number, then:

- (●) $g(z)$ is near one (1)
- ( ) $g(z)$ is near negative one (-1)
- ( ) $g(z)$ will be near zero (0)
- ( ) $g(z)$ will be near 0.5

1 point

3. A cat photo classification model predicts 1 if it's a cat, and 0 if it's not a cat. For a particular photograph, the logistic regression model outputs $g(z)$ (a number between 0 and 1). Which of these would be a reasonable criteria to decide whether to predict if it's a cat?

- (●) Predict it is a cat if g(z) >= 0.5
- ( ) Predict it is a cat if g(z) < 0.5
- ( ) Predict it is a cat if g(z) = 0.5
- ( ) Predict it is a cat if g(z) < 0.7

1 point

4. True/False? No matter what features you use (including if you use polynomial features), the decision boundary learned by logistic regression will be a linear decision boundary.

- (●) False
- ( ) True