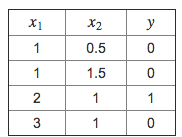
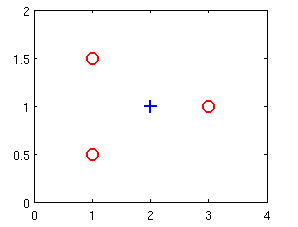
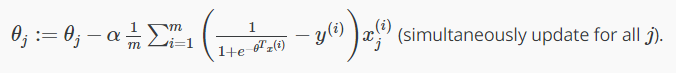
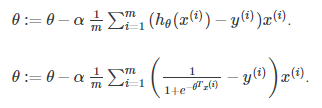
Logistic Regression Quiz

* Suppose you’ve trained a logistic regression classifier, and it outputs on a new example x a prediction hθ(x) = 0.7. This means:
* **Our estimate for P(y=0|x;θ) is 0.3** 🡪 P(y=1|x;θ) - 1
* **Our estimate for P(y=1|x;θ) is 0.7**
* Suppose you have the following training set, + fit a logistic regression classifier hθ(x)=g(θ0+θ1x1+θ2x2)

* Which of the following are true?
* **Adding polynomial features (e.g., instead using hθ(x)=g(θ0+θ1x1+θ2x2+θ3x21+θ4x1x2+θ5x22) ) could increase how well we can fit the training data.**
* For logistic regression, the gradient is given by  Which of these is a correct gradient descent update for logistic regression with a learning rate of α?
* 
* 
* Which of the following statements are true? Check all that apply.
* **The one-vs-all technique allows you to use logistic regression for problems in which each y(i) comes from a fixed, discrete set of values.**
* **The cost function J(θ) for logistic regression trained with m≥1 examples is always greater than or equal to zero.**
* **The sigmoid function g(z)=  is never greater than one (>1).**
* Suppose you train a logistic classifier hθ(x)=g(θ0+θ1x1+θ2x2). Suppose θ0=−6,θ1=1,θ2=0. Which of the following figures represents the decision boundary found by your classifier?
* 6 – x1 >= 0 for y = 1 🡪 y = 1 is x1 <= 6

when X1 + X2 >= 3 is everything to the upper right portion of the magenta line  the region where our hypothesis predicts y = 1