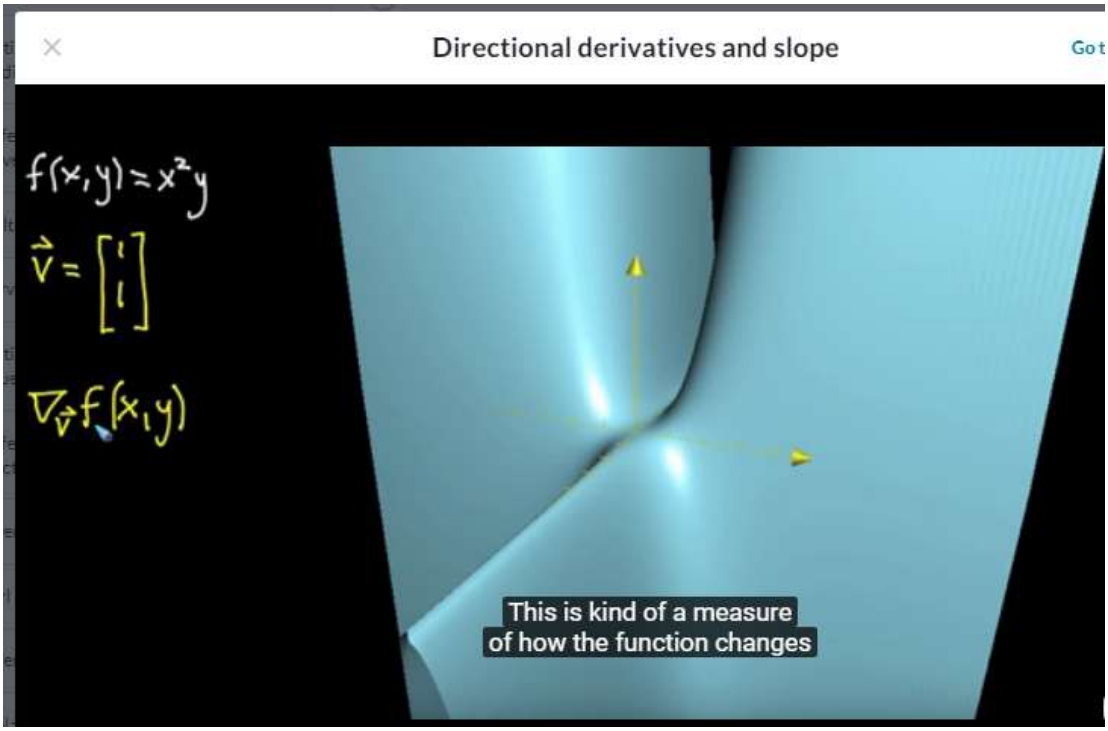
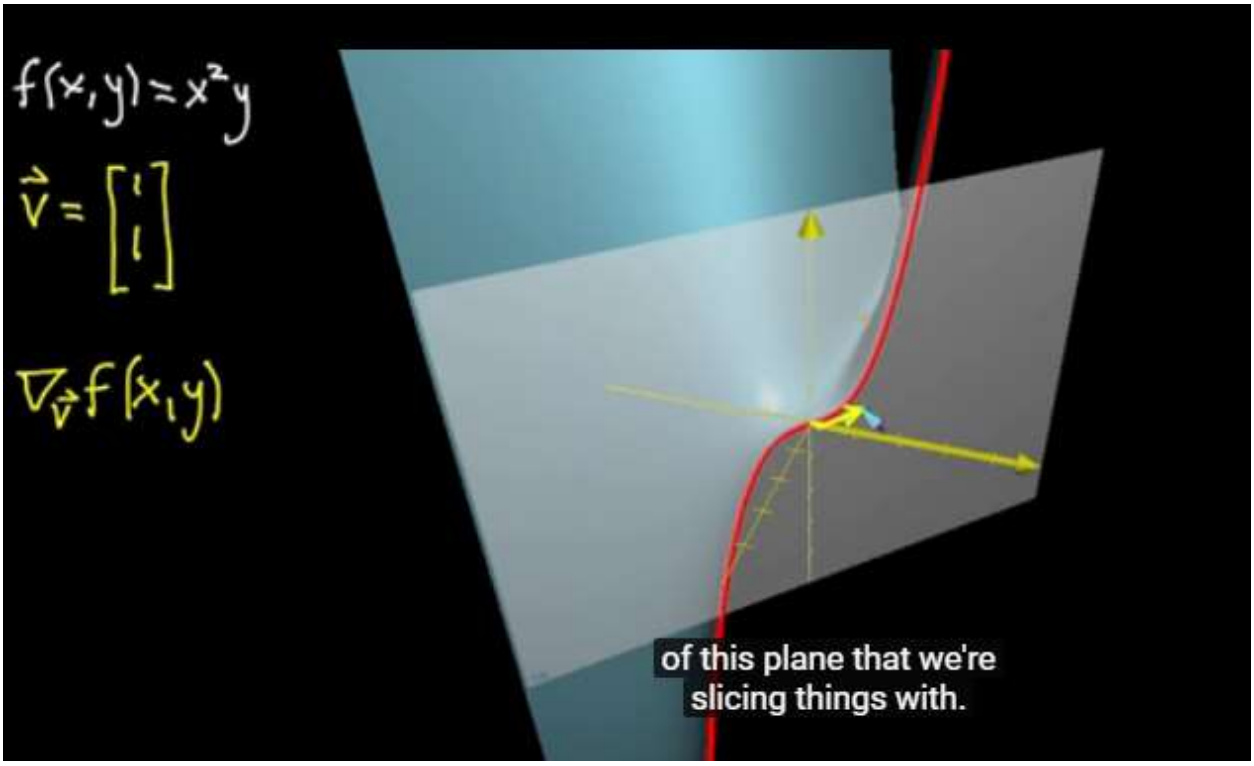
Directional derivatives and slope

- General setup:
    - Vector in input space: vector v
    - Directional derivative which we denote by taking the gradiant and stick the name of the vector as a subscript
        - How the function f(x,y) changes when input moves in the direction of vector v



- Showing what is meant by that:
    - Imagine slicing graph by a plane
    - Plane does not have to be parallel to x or y axis (this is what we did for partial derivative, constant x or y value)
        - This plane will tell you what movement in the direction of your vector looks like



Red line is where graph intersects that slice

Vector v lives on x, y plane and determines the direction of plane we're slicing things with