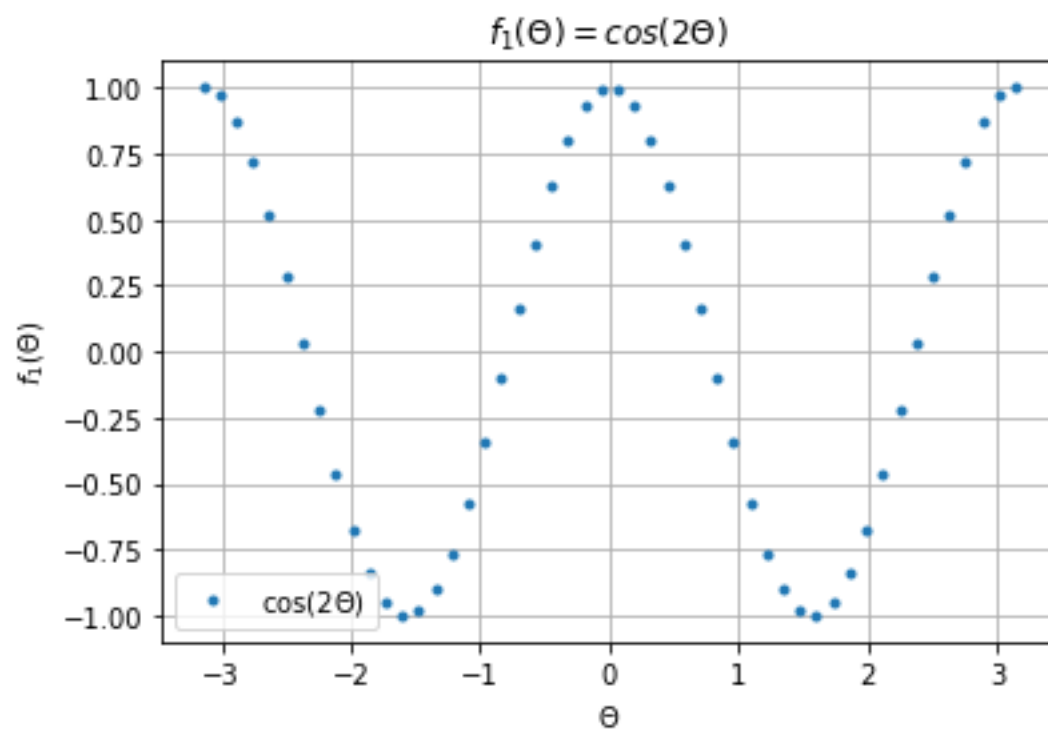
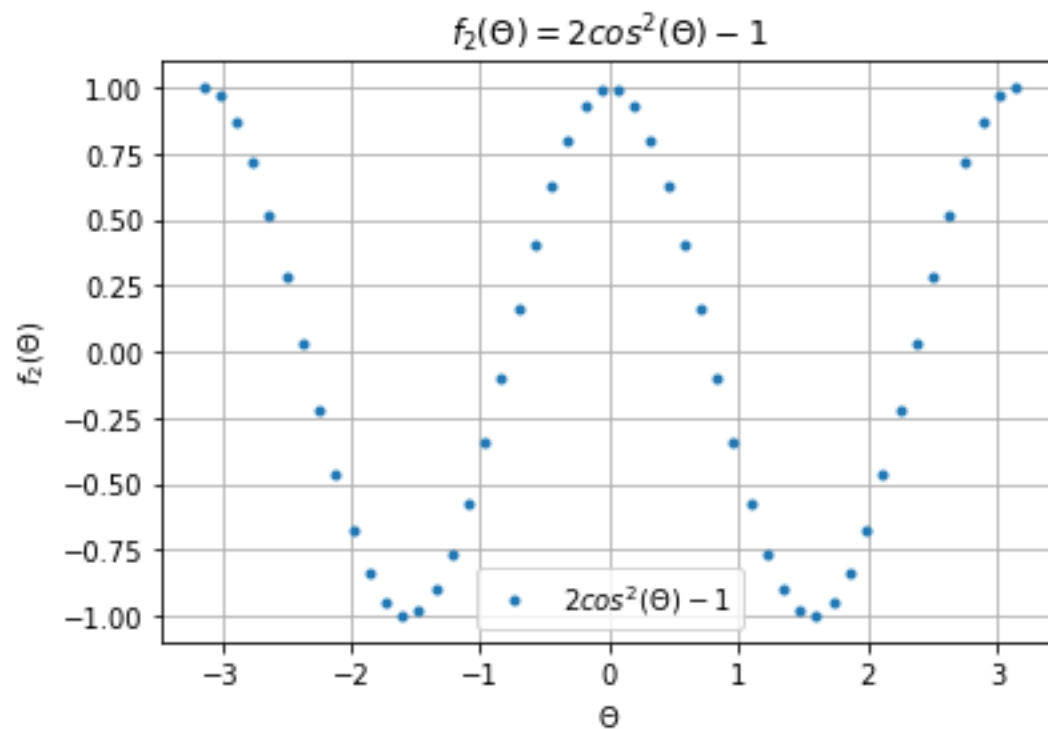


Physics 251: Homework 3

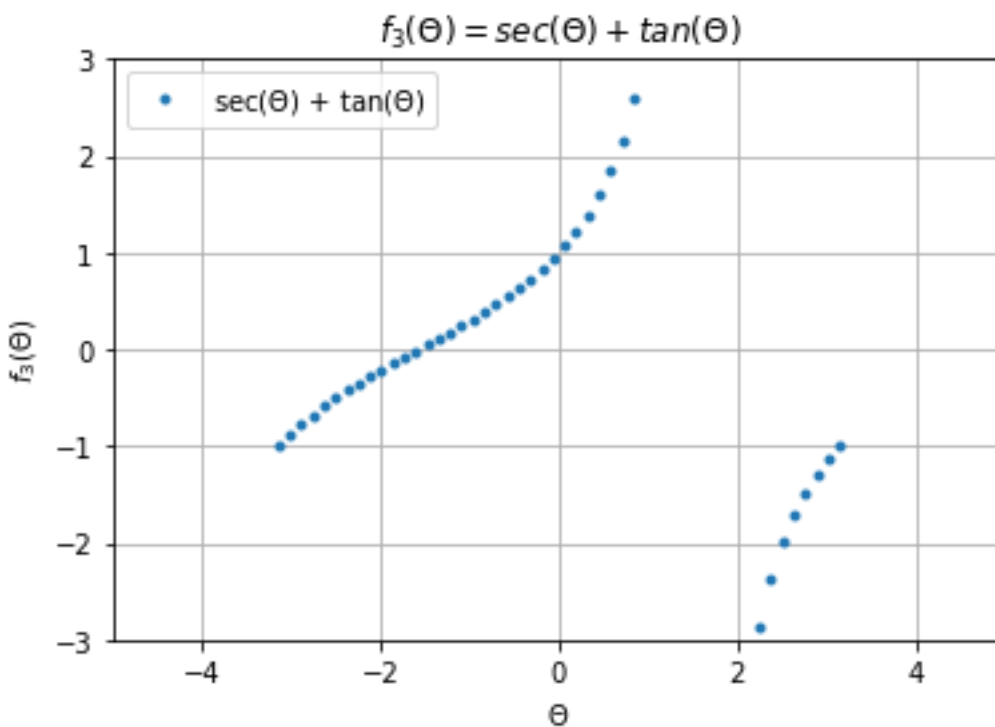
Problem 1.



This is the graph for the function $f(\theta) = \cos(2\theta)$, this is the half angle formula for the second function.



This is the graph for $f(\theta) = 2\cos^2(\theta) - 1$, it is same function as the first one. The first function is the half angle formula for the second so therefore they are equal.



This is the graph for $f(\theta) = \sec(\theta) + \tan(\theta)$, in this graph there are asymptotes at every $\theta = \frac{1}{2}(4\pi n - \pi)$.