Colby

MA121B: Spring 2019

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March 5: Daily Vitamin

This daily vitamin will give you an opportunity to practice some of the concepts and/or calculations presented during class. The daily vitamin is not compulsory and won't be graded but remember: **if you take your vitamins, you'll be stronger for it!**

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1. Using the Rules of Differentiation, compute $f'(x)$, the derivative function.

   (a) $f(x) = 4\sqrt[5]{x^3} - \pi\cos(x) + x\cos(\pi)$,

   (b) $f(x) = \sqrt{2}x^{\sqrt{2}} - x^{\sqrt[3]{5}} + \pi^2 x + x^{\pi^2}$,

   (c) $f(x) = 10x^{2019} - 2019x^{10}$.

   Solution:

2. Using the Double Angle Formulae, compute the derivative.

   (a) $\frac{d}{dt}\sin(t + \pi/6)$

   (b) $\frac{d}{dt}\cos(t - \pi/3)$

   Solution: