

Problem 1. (3 points) Let $f(x) = e^{2x}$. What is $f'(x)$?

Problem 2. (3 points) What is $\frac{d^{41}}{dx^{41}} \cos x$? Explain.

Problem 3. (4 points) Consider the circle $x^2 + y^2 = 25$. What is y' at the point $(-3, 4)$?