Math 135, Calculus 1, Fall 2020

Weekly Quiz 11-04

Show all work: clearly indicate your answer and the reasoning used to arrive at the answer. Unsupported answers may not receive full credit.

Question 1. Compute $f^{(4)}(x)$ if $f(x) = \sin(2x)$.

$f'(x) = \cos(2x) \cdot \frac{d}{dx}(2x) = 2\cos(2x)$

$f''(x) = -4\sin(2x)$

$f'''(x) = -8\cos(2x)$

$f^{(4)}(x) = \boxed{16\sin(2x)}$