2. [8 points] Consider the function $G(x) = x^3 \cos(2x)$.

    a. [4 points] Give the first four nonzero terms of the Taylor series of $G(x)$ centered about $x = 0$.

Answer: _____

    b. [4 points] Find $G^{(2023)}(0)$. You do not need to simplify.

Answer: _____