## It's a cos! It's a sin! It's u-subman!

Consider $\int \sin^3(x) \cos(x) dx$.

1. Use the substitution $u = \sin(x)$ to evaluate the integral.

2. Use the substitution $u = \cos(x)$ to evaluate the integral.

3. Which substitution did you prefer? If both worked, prove that your answers differ by a constant.