2. [7 points] Suppose

$$G(x) = \int_{2x^3}^{1/4} \cos^2(t^2)dt.$$

a. [3 points] Calculate $G'(x)$.

b. [4 points] Find a constant a and a function h so that

$$G(x) = \int_a^x h(t)dt.$$

$a = $ _____

$h(t) = $ _____