Name:_____   Score:_____

Instructions: You must show supporting work to receive full and partial credits. No text book, notes, formula sheets allowed.

Find the following integrals: (You may use the following reduction formula in any problem:

$$\int \sec^n x\, dx = \frac{1}{n-1} \sec^{n-2} x \tan x + \frac{n-2}{n-1} \int \sec^{n-2} x\, dx.)$$

a(3pts) $\int \sin^2 x \cos^3 x\, dx$

b(3pts) $\int \frac{x^2}{\sqrt{x^2 - 4}}\, dx$ (Use trigonometric substitution.)

c(4pts) $\int \frac{2}{1 - x^2}\, dx$ (Use partial fraction.)

(... *The End*)