

# Quotient Rule Practice

Session 10

$$a) \left( \frac{u^2}{u+1} \right)' = \frac{2u(u+1) - u^2(1)}{(u+1)^2} = \frac{u^2 + 2u}{(u+1)^2}$$

$$b) \left( \frac{u^4 + 1}{u^2} \right)' = \frac{4u^3(u^2) - (u^4 + 1)2u}{u^4} = \frac{2u^5 - 2u}{u^4} = 2 \frac{u^4 - 1}{u^3}$$

$$c) \left( \frac{\sin u}{u} \right)' = \frac{\cos u u - \sin u}{u^2}$$