

**Quiz 6**  
Nov. 8, 2006

1. (6 pts) Compute the derivative function  $f'(x)$  by definition ( $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h)-f(x)}{h}$ ).

$$f(x) = \sqrt{x+2}$$

2. (7 pts) Find the derivative of  $f(x) = \frac{x^2}{\sqrt{x^2+1}}$ .

3. (7 pts) Find the derivative of  $f(x) = x^2\sqrt{x^2+1}$ .