

Name:

Sec. 3.3 - Derivatives of trigonometric functions

Math 251

1. Show that  $\frac{d}{dx}(\sec(x)) = \sec x \tan x$

2. Suppose that  $f(\frac{\pi}{3}) = 4$   $f'(\frac{\pi}{3}) = -2$  and let  $g(x) = f(x) \sin(x)$  and  $h(x) = \frac{\cos(x)}{f(x)}$ . Find

(a)  $g'(\frac{\pi}{3})$

(b)  $h'(\frac{\pi}{3})$