

## MAT 170 Section 005

September 27, 2005

Names \_\_\_\_\_

Please work in groups with no more than four people and complete this worksheet during class. Hand in one worksheet for each group.

1. Find  $f'(x)$  if  $f(x) = x^2 \tan x$ .

2. Find  $\frac{dy}{dx}$  if  $y = \frac{\sin x}{1 + \cos x}$ .

3. Find the limit

(a)  $\lim_{x \rightarrow 0} \frac{\sin 3x}{x}$ .

(b)  $\lim_{t \rightarrow 0} \frac{\sin^2 3t}{t^2}$ .