

## MATH 141: QUIZ 5 SECTIONS 3.6 AND 3.7

ANN CLIFTON  
UNIVERSITY OF SOUTH CAROLINA

Name: \_\_\_\_\_

**No phone or calculator.** You must show all work to receive full credit. Be sure to make reasonable simplifications.

1. **(5 points)** Find the *second* derivative,  $f''(x)$ , of  $f(x) = \cot(4x)$ .

2. **(5 points)** Using implicit differentiation, find  $\frac{dy}{dx}$  from the equation below:

$$x^2y = 5y + x - 2$$