

## Mathematics 552

### Quiz #6

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

- (1) State the chain rule for  $\frac{d}{dt}u(x(t), y(t))$

$$\frac{d}{dt}u(x(t), y(t)) =$$

- (2) If  $f(z) = u(x, y) + iv(x, y)$  give formulas for the derivative  $f'(z)$  in terms of the  $x$  and  $y$  partial derivatives of  $u$  and  $v$ .

$$f'(z) =$$