

Please show **all** your work! Answers without supporting work will not be given credit.  
Write answers in spaces provided.

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

1. Let  $y$  be a function of  $x$ . Use implicit differentiation on the following expressions:

(a) [1 pt]  $\frac{d}{dx}(xy)$

$$\frac{d}{dx}(xy) = \underline{\hspace{10em}}$$

(b) [1 pt]  $\frac{d}{dx}\left(\frac{x}{y}\right)$

$$\frac{d}{dx}\left(\frac{x}{y}\right) = \underline{\hspace{10em}}$$