

Remember to always show all supporting work.

1. (2 points) (See WeBWorK 3.6 #9) Find the derivative of  $y = x(x^2 + 10)^{1/2}$ .

2. (4 points) (See WeBWorK 3.8 #14) Find  $dy/dx$ :

$$x^y = y^x$$

(The assignment continues on the back.)

3. (4 points) (See WeBWorK 3.7 #2) Use implicit differentiation to find  $\frac{dy}{dx}$ , given:

$$x^2(x - y)^2 = x^2 - y^2$$