Name _____ Section A, C, D 10

MA 104 In class problem 20 Feb 2008

1. Find $\dfrac{dy}{dx}$ if $x^2y = \cos y$

2. Find $\dfrac{dx}{dy}$ if $x^2y = \cos y$

3. Find $\dfrac{dy}{dt}$ if $e^{xy} + \sin x = \ln y$

4. Find $\dfrac{dx}{dt}$ if $e^{xy} + \sin x = \ln y$

5. Find $\dfrac{dy}{dx}$ if $2y^3t + t^3y = 1$ and $\dfrac{dt}{dx} = \dfrac{1}{\cos t}$.

6. A robot has been designed to travel along the path $(x^2 + y^2)^2 = 4x^2y$. To ensure the robot can easily interact with work stations, we must set them up along the path where the robot stops. How many stations are we constructing? Where should the stations be located?