1. A circle of radius 3 inches is inside a square with 12-inch sides (see figure below). How fast is the area between the circle and square changing if the radius is increasing at 4 inches per minute and the sides are increasing at 2 inches per minute?



1. Find in two way (a) by differentiating implicitly and (b) by explicitly solving for y and then differentiating. Then find the value of at the given point using your results from both the

implicit and the explicit differentiation.

, point: (5, 2)

1. Find using implicit differentiation and then find the slope of the line tangent to the graph of the equation at the given point.

point: (2, 5)

1. Find in two ways: (a) by using the “usual” differentiation patterns and (b) by using logarithmic differentiation.

1. use logarithmic differentiation to Find