Worksheet 10/14/2024

1) The following equation describes a rotated ellipse:

$$x^2 - 3xy + y^2 = 5$$

Find the equation of the tangent line to this ellipse at (1,4).

2) The following equation describes a figure-8 shape:

$$2(x^2 + y^2)^2 = 25(x^2 - y^2)$$

Find the equation of the tangent line to figure-8 at (3,1).