Directions Use logarithmic differentiation to find the derivatives of the given functions.

$$1. \qquad y = (5x+3)^x$$

$$2. y = \sqrt{x} \sin(x) \cos(x)$$

Directions Use logarithmic differentiation to find the derivatives of the given functions

$$1. \qquad y = x^{5x+3}$$

$$2. y = x^2 \cos(x) \sin(x)$$