Exercise 1 (6 points)
A snowball melts so that its surface area decreases at a rate of 1 cm/min. Find the rate at which the diameter is decreasing when the diameter is 10 cm.

Exercise 2 (4 points)
Differentiate the function \( y = (\sin x)^2 \) (show all your steps)
Exercise 1 (4 points)
Differentiate the function \( y = x \tanh^{-1} x + \ln\sqrt{1 - x^2} \) (show all your steps)

Exercise 2 (6 points)
A snowball melts so that its surface area decreases at a rate of 2 cm/min. Find the rate at which the diameter is decreasing when the diameter is 15 cm.