3.9 Derivatives of Inverse Trigonometric Functions
Day 2

Ex 1) $y = e^{-x/4}$

$y' =$

Ex 2) $y = e^{\sqrt{x}}$

$y' =$

Ex 3) $y = \ln(\ln x^2)$

$y' =$

Ex 4) At what point on the graph of $y = 2e^x - 1$ is the tangent line perpendicular to the line $y = -3x + 2$?

Ex 5) A line with slope m passes through the origin and is tangent to $y = \ln(x/3)$. What is the value of m?

Ex 6) The spread of flu in a certain school is modeled by the equation

$$P(t) = \frac{200}{1 + e^{5-t}}$$

P = Population
t = days

Estimate the initial number of students with the flu.

How fast is it spreading after 4 days?

Ex 7) Which of the following give the slope of the tangent line to the graph of $y = 2^{1-x}$ at $x = 2$?

a. $-1/2$
b. $1/2$
c. -2
d. 2
e. $-(\ln 2)/2$