DEN Homework # 1

Solve the problems and then bring your work to the lab in the second week of school.

1. For the equation $y' = \dfrac{2xy}{x^2 - 1}$ find a general solution
and then the particular solutions for the following initial conditions:

  a) $y(0) = 1$;   b) $y(2) = -3$;   c) $y(-3) = 16$;   d) $y(2) = 0$.

2. For the equation $y' = \dfrac{e^x}{e^y}$ find a general solution
and determine its typical asymptotic rate of growth at infinity.