MAT125, Paper Homework 1

1. Find all real values of $x$ which satisfy the following:
   
   (a) $\ln(x^2 - 1) = 3$

   (b) $e^{2x} - 3e^x + 2 < 0$

2. Find all values of $x$ with $0 \leq x \leq 2\pi$ which satisfy the following:
   
   (a) $\cos(x^2) - 1/2 = 0$

   (b) $\sin(x) > \cos(x)$