

## Exponential/Logarithmic Functions and the Chain Rule

Simplify

1)  $\ln e^{x^2-1}$

2)  $e^{\ln(x^2-1)}$

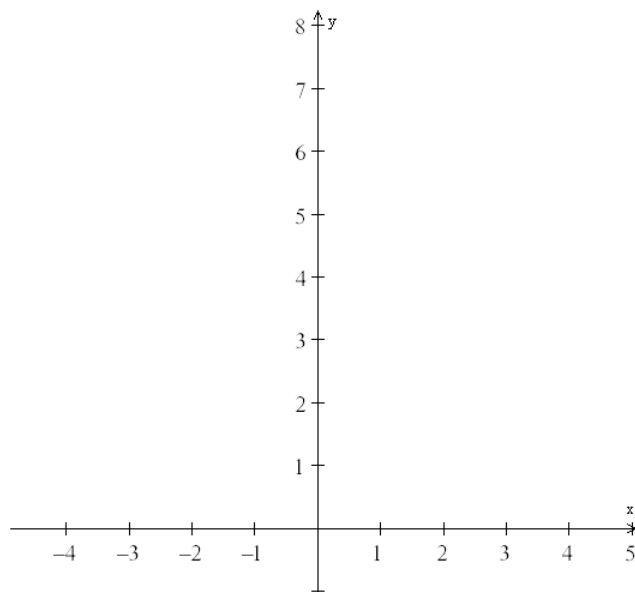
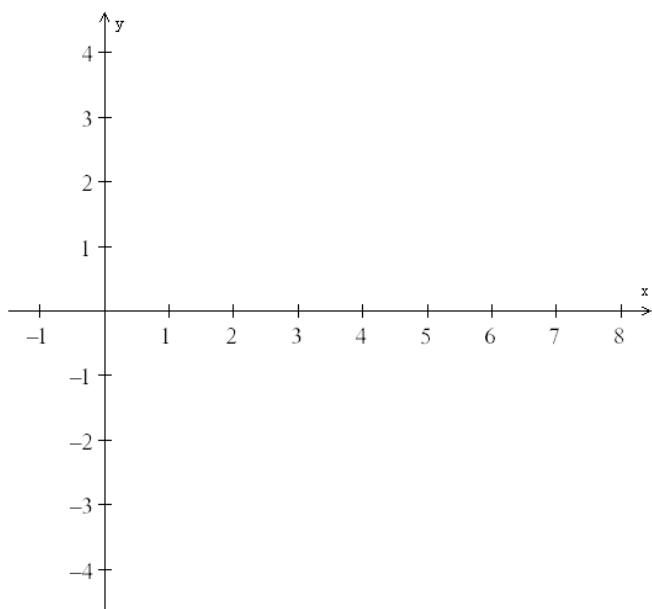
3)  $\ln \sqrt{x}$

4)  $e^{\left[\frac{1}{2}\ln(x^2-1)\right]}$

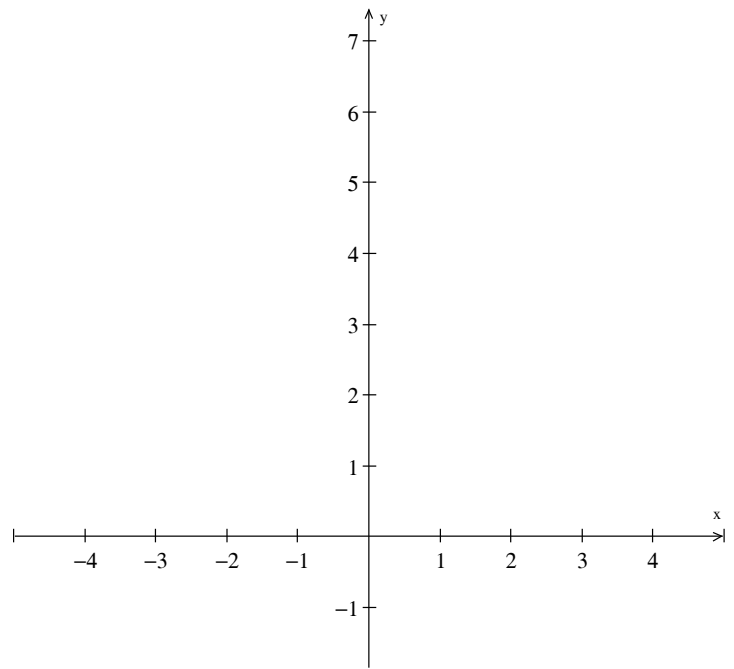
5) Find the traits and sketch the graphs of

a)  $y = e^x$

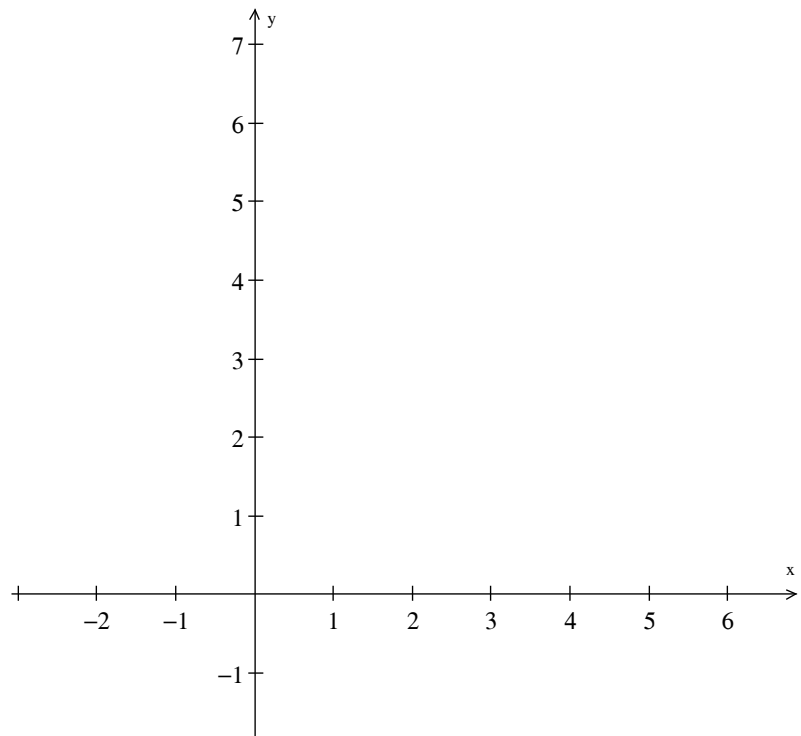
b)  $y = \ln x$



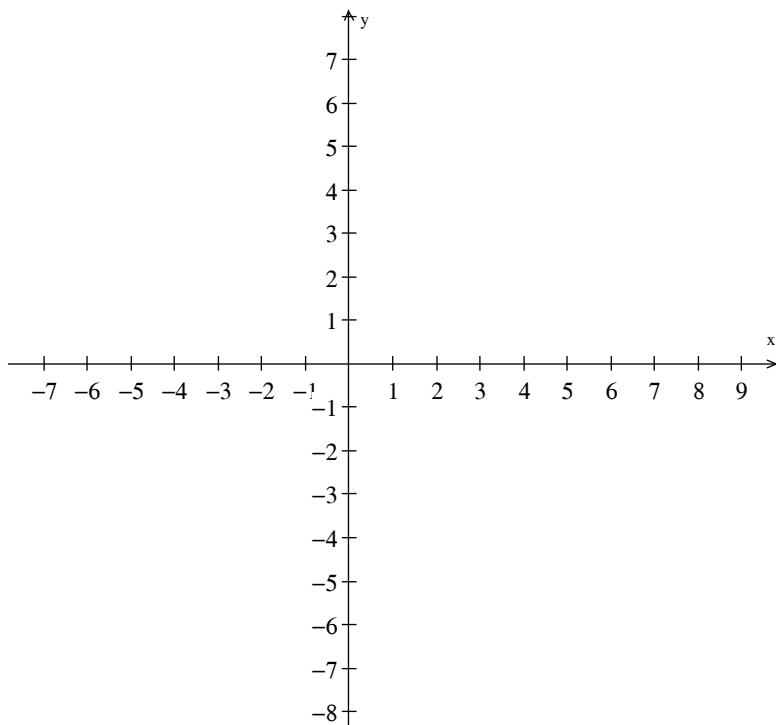
6)  $y = e^{x^2-1}$



7)  $y = e^{\sqrt{x}}$



8)  $y = \ln(x^2 - 2x - 3)$



9)  $y = \ln(x^3 - 27x)$

