Natural logarithms

The inverse of $y = e^x$ is $y = \ln x$

$$\ln e^x =$$

$$e^{\ln x} =$$

Solve $e^x = 5$

Solve $2 \ln x + 1 = 5$

Solve $e^{2x} + 2e^x - 15 = 0$

Solve $e^x - 2e^{-x} = 1$

Solve $\ln(3x + 1) = 2$

Solve $e^{2x} + 5e^x = 6$

Solve $2^x e^{x+1} = 3$ giving your answer as an exact value.