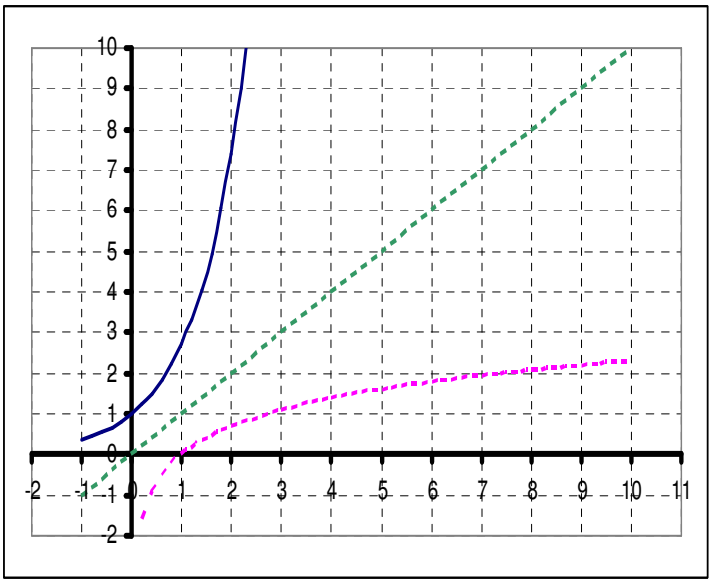
MATH 100 Class Session 11/05/2008

1. There are graphs of three functions shown below. The three functions have the following rules: $y = x$, $y = e^x$, and $y = \ln(x)$. Match the rules to the appropriate curves.



2. Simplify each of the following expressions.

a. $\sqrt{16x^{16}}$

b. $(-27x^{12})^{\frac{1}{3}}$

c. $(64x^{12})^{\frac{2}{3}}$

d. $100(1.25)^6$

e. $100e^{-0.26}$

f. $\ln(100)$

g. $2\ln(10)$

h. $\ln(5^3)$

i. $3\ln(5)$

3. Solve for x:

a. $3000 = 2000(1.09)^x$

b. $3000 = 2000e^{0.09x}$

4. Solve for x:

   a. $25 = \ln(x)$

   b. $10 = 2\ln(3x - 1)$

5. A Honda Accord bought for $24,000 in 1995 has been losing value at a continuously compounding rate of 12% per year. What was the value of such a car in the used car market in 2004? When will the car's value have depreciated to $10,000.