

Page 317 39-50, not 4's  
and 52-54

42. Starting with  $g(x) = \ln x$ : reflect across the  $x$ -axis,  
then vertically shrink by a factor of  $\frac{1}{\ln 5} \approx 0.62$ .

46. (a)

50.

Domain:  $(0, \infty)$ ; Range:  $(-\infty, \infty)$ ;

Continuous; Always increasing;

Asymptote:  $x = 0$ ;

$\lim_{x \rightarrow \infty} f(x) \rightarrow \infty$ ;  $\lim_{x \rightarrow 0^+} f(x) \rightarrow -\infty$

54.  $\approx 8.9987$  lumens

## Honors Pre-Calc

11-27-07

1. Find the exact solution algebraically, and check your answer.

$$3 \cdot 4^{\frac{x}{2}} = 96$$

$$\log_2 x = 5$$

2. Find the exact solution algebraically, and check your answer.

$$0.98^x = 1.6$$

$$7 - 3e^{-x} = 2$$

3. Find the exact solution algebraically, and check your answer.

$$\ln x^6 = 12$$

$$2e^{2x} + 5e^x - 3 = 0$$

4. Find the exact solution algebraically, and check your answer.

$$\log x - \frac{1}{2} \log(x+4) = 1$$