

7.7 Base e and Natural Logarithms  
Honors Algebra 2

1. Solve the following equations:

a.  $4^x = 19$

c.  $2^{a+2} = 9$

b.  $6^x = 40$

d.  $11^{b-3} = 5^b$

2. Condense the following:

a.  $3 \ln 10 - \ln 8$

b.  $\ln 40 + 2 \ln \frac{1}{2} + \ln x$

3. Solve the following equations:

a.  $4e^{-2x} - 5 = 3$

b.  $3e^{4x} - 12 = 15$

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c.  $4e^{-x} + 8 = 17$

f.  $5 \ln 6x = 8$

d.  $5e^x - 24 = 16$

g.  $-4 \ln 2x = -26$

e.  $3 \ln 4x = 24$

h.  $\ln 3x = 8$