Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Use the properties of logarithms to rewrite the expression in terms of log 2 and log 7.**

Then use and to approximate the expression.

1. 
2. 
3. 
4. 
5. 
6. 

**Expand** the following expressions:

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 
12. 

**Convert Log to Exponential**:

1. 
2. 
3. 

**Convert Exponential to Log**

1. 
2. 
3. 

Solve:

1. 
2. 
3. 