**5.2 Notes: Integration & Natural Logs**

**Essential Question:** How are standard integration techniques (especially u-sub) used to find integrals

 involving natural logs?

We define .

In addition, if ***u*** is a function of ***x***, then .

EXAMPLES:

1. 
2. If the degree of the numerator is greater than or equal to the degree of the denominator (and you can’t simplify by factoring), use long division to simplify the expression. Then integrate.



1. This one has a twist! 
2. Solve the differential equation  if .

***COMPLETE LIST OF TRIG INTEGRALS***

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 
12. Solve the differential equation  if .