

**QUIZ 7 – Math 105 – Fall 2007**  
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1.  $f(x) = \frac{2}{x}$ ,  $g(x) = \frac{x}{x+2}$ ,  $f \circ g(x) =$

2. Find the inverse of  $y = \frac{1+3x}{5-2x}$

3. What is the leading term in  $P(x) = (x-2)(1-x)x$ ?

4. How does  $P(x) = (x-3)(x+2)(3x-2)$  behave for  $x \sim -2$ ?

5. Graph  $y = \ln x$  (**on back**)

6. Compute  $\ln(100e^2) - \ln 2 - \ln 50 =$

7. If  $e^{3k} = 1.5$ ,  $k =$

8. Compute  $\lim_{n \rightarrow \infty} \left(1 + \frac{2}{n}\right)^n =$

9. Write  $e(e^x)^x / (e^x e^x) =$  as  $e^{A^2}$ .  $A =$

10. Write  $2^x$  as an exponential with base  $e$