

1/31/13 Log test Review 2

- ① Find the largest integer that is less than  $\log_3(87)$ .
- ② Find the largest integer that is smaller than  $\log_5(130)$ .
- ③ Solve for  $x$   $4x^{1/3} = 8$
- ④ Solve for  $x$   $3^{3x+2} = \frac{1}{9}$
- ⑤ Change to logarithmic form  $8^{-3} = \frac{1}{512}$
- ⑥ Expand using the properties of logarithms:  $\log\left(\frac{P^8 Q^2}{M^5}\right)$
- ⑦ Write as a single log:  $8[\log_b(x) + \log_b(y)]$
- ⑧ I'm loaning money to my brother but I'm charging him 5.25% interest compounded quarterly (because I'm a jerk). If he borrows \$500 from me and doesn't pay me for 10 years (now who's the jerk?) how much will he owe me?