

Math 06, Homework 7 on Sections 10.4, 10.5
due Thur, March 21 at the start of class.

These first six questions from the book are 2 points each. Write your work on a separate sheet. Show clearly all your working out and reasoning and check your answers match the ones in the book at the end of the section.

1. **Q15, p. 1026.** Let $g(x) = 4^{x+1}$ and evaluate: $g(2)$
 2. **Q25, p. 1026.** Graph: $y = 4^x$
 3. **Q49, p. 1027.** Solve: $3^{x-1} = \frac{1}{27}$
 4. **Q1, p. 1043.** Graph: $y = \log_4 x$
 5. **Q39, p. 1044.** Convert to exponential form: $\log_8 4 = 2/3$
 6. **Q43, p. 1044.** Evaluate: $\log_2 64$
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These next six questions are 2 points each. It is very important that you show clearly any work you had to do to get the answer and explain your reasoning.

- (10.4) Q7.** Let $f(x) = 2^{x+2}$ and evaluate: $f(-6)$
- (10.4) Q8.** Graph and sketch the horizontal asymptote: $y = (1/2)^x + 3$
- (10.4) Q9.** Solve: $5^{x+5} = 1$
- (10.5) Q10.** Evaluate: $\log_{10} 1000000$
- (10.5) Q11.** Convert to exponential form: $\log_3 \frac{1}{81} = -4$
- (10.5) Q12.** Solve: $\log_2 x = 8$