

## Homework - due April 28th, 2014

**Solve each equation.**

1)  $125^v = \left(\frac{1}{625}\right)^{-3v}$

2)  $3^{3b} = 3^{-3b-2}$

3)  $64^{-2x} = \frac{1}{16}$

4)  $125^{3x} = 25^{x-3}$

**Simplify. Your answer should contain only positive exponents.**

5)  $2y^{-1} \cdot y^4$

6)  $2x^2y^{-2} \cdot x^3y^{-3}$

**Evaluate each expression.**

7)  $\log_4 64$

8)  $\log_7 343$

9)  $\log_2 4$

10)  $\log_6 \frac{1}{36}$

**Solve each equation.**

11)  $\log_2 (-n - 10) = \log_2 1$

12)  $\log_{12} (2x + 2) = \log_{12} (3x - 7)$