

UB SAT 2009  
Homework #6  
Exponents and Roots  
*Due: Thurs, Feb 26*

Solve for  $x$ . Leave answers as fractions.

1.  $3^{2x} = 27$

2.  $7^{x-1} = 49$

3.  $2^{x-1} = 2^{2x}$

4.  $6 \cdot 6^x = 6^{2x-1}$

5.  $16^x = 2^{x-3}$

6.  $3^{-2x} = 9$

7.  $9^x = 27^{x-1}$

8.  $\left(\frac{3}{4}\right)^{3x-2} = \left(\frac{9}{16}\right)^{2x}$

9.  $y^{x-1} = y^{3x+1}$