

Objetivo:

Solve exponential equations and inequalities using common logarithms.



Skills Practice: Lesson 7-6

4.  $\log 0.3$

$-0.5229$

5.  $3^x > 243$

$\log 3^x > \log 243$

$x \frac{\log 3}{\log 3} > \frac{\log 243}{\log 3}$

$x > 5$

$3^x > 3^5$   
 $x > 5$

6.  $16^v \leq \frac{1}{4}$

$4^{2v} \leq 4^{-1}$

$\frac{2v}{2} \leq \frac{-1}{2}$

$v \leq -\frac{1}{2}$

$$\textcircled{9} \quad 5^{3b} = 106$$

$$\log 5^{3b} = \log 106$$

$$\frac{3b \log 5}{\log 5} = \frac{\log 106}{\log 5}$$

$$\frac{3b}{3} = \frac{2.897557}{3}$$

$$b = 0.9659$$

$$\textcircled{13} \quad 3^{r-5} = 4.1$$

$$\log 3^{r-5} = \log 4.1$$

$$\frac{(r-5) \log 3}{\log 3} = \frac{\log 4.1}{\log 3}$$

$$\frac{r-5}{+5} = \frac{1.284335}{+5}$$

$$r = 6.2843$$