

Practice (Days 1-2)**Solve each equation.**

1) $2^{3n} = 32$

2) $27^{2-2x} = 81^{-3x}$

3) $6^{-2r} = \frac{1}{216}$

4) $4^{2x+3} = 16^{-2x}$

Rewrite each equation in exponential form.

5) $\log_{12} 144 = 2$

6) $\log_r 185 = -17$

7) $\log_m 165 = n$

8) $\log_{16} y = x$

Rewrite each equation in logarithmic form.

9) $8^2 = 64$

10) $\left(\frac{1}{5}\right)^0 = 1$

11) $20^n = m$

12) $18^x = 109$

Evaluate each expression.

13) $\log_6 216$

14) $\log_{32} \frac{1}{2}$

15) $\log_8 2$

16) $\log_2 64$

Practice (Days 1-2)

Solve each equation.

1) $2^{3n} = 32$

$$\left\{ \frac{5}{3} \right\}$$

2) $27^{2-2x} = 81^{-3x}$

$$\{-1\}$$

3) $6^{-2r} = \frac{1}{216}$

$$\left\{ \frac{3}{2} \right\}$$

4) $4^{2x+3} = 16^{-2x}$

$$\left\{ -\frac{1}{2} \right\}$$

Rewrite each equation in exponential form.

5) $\log_{12} 144 = 2$

$$12^2 = 144$$

6) $\log_r 185 = -17$

$$r^{-17} = 185$$

7) $\log_m 165 = n$

$$m^n = 165$$

8) $\log_{16} y = x$

$$16^x = y$$

Rewrite each equation in logarithmic form.

9) $8^2 = 64$

$$\log_8 64 = 2$$

10) $\left(\frac{1}{5}\right)^0 = 1$

$$\log_{\frac{1}{5}} 1 = 0$$

11) $20^n = m$

$$\log_{20} m = n$$

12) $18^x = 109$

$$\log_{18} 109 = x$$

Evaluate each expression.

13) $\log_6 216$

$$3$$

14) $\log_{32} \frac{1}{2}$

$$-\frac{1}{5}$$

15) $\log_8 2$

$$\frac{1}{3}$$

16) $\log_2 64$

$$6$$