

Log Properties (RED)**Product Property**

1. Simplify the expressions.
 - a. $\log_3 4 + \log_3 3$
 - b. $\log_5 2y + \log_5 22y$
 - c. $\log_6 2x + \log_6 x + \log_6 5x$
2. Expand the expressions
 - a. $\log_3 4x$
 - b. $\log_5 2 \cdot 3$
 - c. $\log_7 ((x + 7)(x - 2))$

Check in w/ Ms. Lambert for a Quick Check.
(to check you understanding of the property)

Quotient Property

3. Simplify the expressions.
 - a. $\log_6 8 - \log_6 4$
 - b. $\log_3 16x - \log_3 2x$
 - c. $\log(x + 5) - \log(x - 2)$
4. Expand the expressions
 - a. $\log_9 \frac{x}{y}$
 - b. $\log_3 \frac{1}{2}$
 - c. $\log_6 \frac{x-3}{x+4}$

Check in w/ Ms. Lambert for a Quick Check.
(to check you understanding of the property)

Power Property

5. Simplify the expressions.

a. $4\log_2 x$

b. $5\log_6 7$

c. $2\log(x - 8)$

6. Expand the expressions

a. $\log_3 x^2$

b. $\log_4(6x)^3$

c. $\log_8(x - 9)^4$

Check in w/ Ms. Lambert for a Quick Check.
(to check you understanding of the property)

Change of Base

7. $\log_4 64$

8. $\log_6 216$

9. $\log_4 16$

10. $\log_3 \frac{1}{243}$

11. $\log_{343} 7$

12. $\log_2 16$

Check in w/ Ms. Lambert for a Quick Check.
(to check you understanding of the property)