

Condensing Logarithms Practice Problems

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Condense each expression to a single logarithm.

1) $24\log_9 x - 6\log_9 y$

2) $4\log_2 u - 3\log_2 v$

3) $6\ln 6 + 6\ln 5$

4) $\log_8 c + \frac{\log_8 a}{3} + \frac{\log_8 b}{3}$

5) $\log_3 x + \log_3 y + 4\log_3 z$

6) $5\log_3 x - 30\log_3 y$

7) $5\log_9 6 + 2\log_9 5$

8) $24\log_7 5 + 6\log_7 2$

9) $\log u + \log v + 3\log w$

10) $4\log_3 u + 2\log_3 v$

Answers to Condensing Logarithms Practice Problems

$$1) \log_9 \frac{x^{24}}{y^6}$$

$$2) \log_2 \frac{u^4}{v^3}$$

$$3) \ln (5^6 \cdot 6^6)$$

$$4) \log_8 (c\sqrt[3]{ba})$$

$$5) \log_3 (y^{xz^4})$$

$$6) \log_3 \frac{x^5}{y^{30}}$$

$$7) \log_9 (5^2 \cdot 6^5)$$

$$8) \log_7 (2^6 \cdot 5^{24})$$

$$9) \log (vuw^3)$$

$$10) \log_3 (v^2u^4)$$