

Math 3 Advanced
16.1 Logrithm Properties

Write as the sum or difference of logarithms with no exponents.

1. $\log \frac{n^8}{m^2}$

2. $\log \frac{x^4}{y^{10}}$

3. $\log \frac{10a^2b^3}{c^8}$

4. $\log \frac{100x^2z^9}{y^6}$

5. $\log \frac{a^6d^7}{c^9b^3}$

6. $\log \frac{y^{10}z^4}{w^2x^8}$

Write as a single logarithm.

7. $4 \log w + 4 \log u + 5 \log v$

8. $10 \log r + 2 \log s + 5 \log t$

9. $3 \log p - 10 \log m - 3 \log n$

10. $9 \log z - 7 \log x - 2 \log y$

11. $6 \log c + 2 \log b - 9 \log a$

12. $2 \log b + 6 \log d - 3 \log c$

13. $8 \log t - 4 \log s + 7 \log v$

14. $9 \log z - 5 \log y + 8 \log x$

Answer List

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|--|---|
| 1. $8 \log n - 2 \log m$ | 2. $4 \log x - 10 \log y$ |
| 3. $1 + 2 \log a + 3 \log b - 8 \log c$ | 4. $2 + 2 \log x + 9 \log z - 6 \log y$ |
| 5. $6 \log a + 7 \log d - (9 \log c + 3 \log b)$ | 6. $10 \log y + 4 \log z - (2 \log w + 8 \log x)$ |
| 7. $\log w^4 u^4 v^5$ | 8. $\log r^{10} s^2 t^5$ |
| 9. $\log \frac{p^3}{m^{10} n^3}$ | 10. $\log \frac{z^9}{x^7 y^2}$ |
| 11. $\log \frac{c^6 b^2}{a^9}$ | 12. $\log \frac{b^2 d^6}{c^3}$ |
| 13. $\log \frac{t^8 v^7}{s^4}$ | 14. $\log \frac{z^9 x^8}{y^5}$ |

Catalog List

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|---------------|---------------|---------------|---------------|
| 1. TRI KC 37 | 2. TRI KC 38 | 3. TRI KC 41 | 4. TRI KC 42 |
| 5. TRI KC 45 | 6. TRI KC 46 | 7. TRI KD 49 | 8. TRI KD 51 |
| 9. TRI KD 53 | 10. TRI KD 55 | 11. TRI KD 57 | 12. TRI KD 59 |
| 13. TRI KD 61 | 14. TRI KD 63 | | |