

Single Logarithm and Expansion

Sheet 1

Expand each expression :

1) $\log_a \left(\frac{x^2 y^3}{m n} \right) =$ _____

2) $\log_3 \sqrt{5a^7} =$ _____

3) $5 \log_4 \left(\frac{a^2 b}{n^3} \right) =$ _____

4) $\log_2 \left(\frac{b}{c} \right)^4 =$ _____

5) $4 \log_a \left(\frac{p^6 q^3}{r^2 s} \right) =$ _____

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Rewrite each expression

6) $(4 \log_5 x + 5 \log_5 y) =$ _____

7) $(3 \log_7 m + 12 \log_7 n) =$ _____

8) $\frac{1}{3} (4 \log_2 s + \log_2 t) =$ _____

9) $40 \log_3 t - (8 \log_3 w + 16 \log_3 x) =$ _____

10) $6 (\log_8 5 - \log_8 m) =$ _____