Condense each logarithmic expression using the properties.

1. $6 \log 7$

2. $\log_6 10 - \log_6 3$

3. $\log_7 5 + \log_7 12$

4. $2 \log_4 8$

5. $\log_6 10 - \log_6 3$

6. $\log_7 5 + \log_7 6$

Expand each logarithmic expression

7. $\log_9 \dfrac{2^6}{7}$

8. $\log \left(8 \cdot 11^6 \right)$

9. $\log \left(2 \cdot 11 \cdot 5 \right)$

10. $\log_6 \dfrac{12}{7^2}$

11. $\log_4 \left(xy^4 \right)$

12. $\log_5 \left(12 \cdot 7^5 \right)$

Condense each logarithm

13. $5 \log_9 x + 7 \log_9 y - 3 \log_9 z$

14. $5 \log_3 x + \dfrac{2}{3} \log_3 y$