

$$\text{e) } \log \sqrt[3]{9cd} = \log (9cd)^{\frac{1}{3}} = \frac{1}{3} \cdot \log(9cd) = \frac{1}{3} \cdot (\log 9 + \log c + \log d)$$

$$\text{f) } \log(x \sqrt{y}) = \log(x \cdot y^{\frac{1}{2}}) = \log x + \log y^{\frac{1}{2}} = \log x + \frac{1}{2} \cdot \log y$$

