

Assuming  $x$ ,  $y$  and  $z$  are positive, use properties of logarithms to write the expression as a **single** logarithm

$$\ln 3 + \frac{1}{3} \ln(4 - x^2) - \ln x$$

$$4 \ln x - 6 \ln y + 5 \ln z$$

$$3(\ln 3 - \ln x) + (\ln x - \ln 9)$$