

Expand:

$$\log_3 8xy$$

$$\log_3 8 + \log_3 x + \log_3 y$$



Expand:

$$\log_b \left(\frac{mn}{k} \right)$$

$$\log_b mn - \log_b k$$

$$\log_b m + \log_b n - \log_b k$$



Expand:

$$\log_4 \left(\frac{x}{32} \right)$$

$$\log_4 x - \log_4 32$$

←




Expand:

$$\ln \sqrt{3x}^{\frac{1}{2}}$$

(Note: A handwritten arrow points from the exponent $\frac{1}{2}$ to the expression $\ln(3x)$ below.)

$$\frac{1}{2} [\ln 3x]$$

$$\frac{1}{2} [\ln 3 + \ln x]$$


$$\sqrt{\quad} = (\quad)^{\frac{1}{2}}$$