Quiz 22

1. $\log_3 5 = \dfrac{\ln 5}{\ln 3}$ by change of base formula

2. $\log_2 8 - \log_2\left(\frac{1}{4}\right) = \log_2 2^3 - \log_2 2^{-2} =$

$3 - (-2) = 5.$

or $\log_2 8 - \log_2\left(\frac{1}{4}\right) = \log_2 \dfrac{8}{\left(\frac{1}{4}\right)} = \log_2 32 = 5$

3. $\log_3 \dfrac{(x+1)^3}{(x-3)^2} = 3\log_3(x+1) - 2\log_3(x-3)$

4. $3\log_2 x - 5\log_2(x+2) =$

$\log_2 x^3 - \log_2 (x+2)^5 =$

$\log_2 \dfrac{x^3}{(x+2)^5}$