Q1. $\dfrac{1}{\log_{ab} abc} + \dfrac{1}{\log_{bc} abc} + \dfrac{1}{\log_{ca} abc}$

Q2. If $\log_3 a \times \log_a x = 4$

Q3. $\log_3 x + \log_9 x^2 + \log_{27} x^3 = 9$

Q4. Find the value of $2^{\log_3 5} - 5^{\log_3 2}$

Q5. If a, b, c are positive real numbers then $a^{\log b - \log c} \times b^{\log c - \log a} \times c^{\log a - \log b}$.

Q6. If $\dfrac{\log_2 a}{2} = \dfrac{\log_3 b}{3} = \dfrac{\log_4 c}{4}$ and $a^{\frac{1}{2}} b^{\frac{1}{3}} c^{\frac{1}{4}} = 24$, then find a, b and c.

Q7. Find the number of digits in $n = 2^{12} \times 7^{10}$ (use $\log_{10} 2 = .301$, $\log_{10} 7 = .845$)