Warm Up week 6 sem 2 Block

1. Expand (write as sum/ difference of logs). Simplify if possible.

a) $\log_a\left(\frac{\sqrt[3]{c}}{4a^5}\right)$

$\frac{1}{3}\log_a c - \log_a 4 - 5$

b) $\log_5 4x^5z$

$\log_5 4 + 5\log_5 x + \log_5 z$

2. Write as a single logarithm. Simplify if possible

a) $5 - \log_2 x - 3\log_2 y$

$\log_2\left(\frac{32}{xy^3}\right)$

b) $3\log 2 + \log w - \log 4$

$\log(2w)$

3. An initial sample of 75 bacteria triples every hour.

a) How many will there be after n hours? $75(3)^n$

b) after 10 hours?

$75(3)^{10} = 4,428,675$

c) After how many hours will there be 686,550 bacteria? **(nearest tenth)** 8.3 hrs

Get started on Collab Review Worksheet while I finish stamping.