Quiz Review

1. condense

a) $2\log_4 x + 4\log_4 z - \frac{1}{3}\log_4 y$

b) $\frac{1}{2}\log 49 + 2\log 2 - 3\log 2$

2. expand

a) $\log_5\left(\frac{x^2 y^3}{\sqrt{z}}\right)$

b) $\log_2\left(\frac{\sqrt[5]{x^6}\, y^2}{z^{4/3} k^{1/3}}\right)$

3. solve for x

a) $3(6^{x+1}) = 9$

b) $5^{x-2} + 2 = 10$

c) $\log_2(x+7) + \log_2(3) = 2$

d) $\log_2(x-5) + \log_2(x) = 3$

4. Solve for x

a) $\log_2(x+7) + \log_2(4) = \log_2(x-5)$

b) $\log_4(x+2) - \log_4(x) = \log_2(9)$

5. Simplify

a) $\log_8 32$

b) $\log_5 125$

c) $\log_7 343^2$