

1). Solve for x.

a). $10(3)^{3x} = 30$

b). $3^x = 12$

2). Use the rules of logarithms to show that the following are equivalent.

a). $\log 3 + 3 \log 2 = \log 24$

b). $3 \log 2 - 4 \log 2 = \log \frac{1}{2}$