(1) Write $2^{3}=8$ in log form.
(2) Write $\log _{4} 16=2$ in index form.
(3) Simplify $\log _{3} 4+\log _{3} 8=$
(4) Simplify $\log _{5} 4-\log _{5} 2=$
(5) Simplify $3 \log _{5} 2+\log _{5} 3=$
(6) $\log _{3} 27=2 x$

Solve for $x$
(7) $2^{x}=100$, solve for $x$

