(1) Write in index notation: $\log _{3}\left(\frac{1}{9}\right)=-2$
(2) Write in $\log$ notation: $25^{\frac{1}{2}}=5$
(3) Express as a single logarithm: $2 \log _{3}(4)+\frac{1}{2} \log _{3}(36)$
(4) Solve the following for the unknown:

$$
\log _{5}(3 x+2)=2
$$

(5) Evaluate (Calculate the answer) of the following without using a calculator
a) $\log _{2} 40-\log _{2} 5=$
b) $\frac{\log _{2} 16}{\log _{2} 8}=$
c) $5 \log _{4}(2)-\log _{4}(2)$
(6) If $\log _{6} 5=0.898$ and $\log _{6} 4=0.774$ find values for:
a) $\log _{6} 20=$
b) $\log _{6} 1.25=$

