Friday Worksheet **Name: …….**

^{1}HNMR

1) Two compounds were analysed using ^{1}HNMR, compound A and B.
Both A and B are derived from but-1-ene.
But-1-ene undergoes an addition reaction to produce a primary alcohol. This alcohol is placed in an acidified solution of $Cr_2O_7^{-2}$ to produce compound A.
In another reaction, but-1-ene is reacted with H_2O at 300^{o}C in the presence of H_3PO_4 to produce substance Z, an intermediary substance. Substance Z is then oxidised to produce substance B.

The ^{1}HNMR spectra of both A and B are shown below. Using the spectra identify substance A and B. Give reasons for your choice.