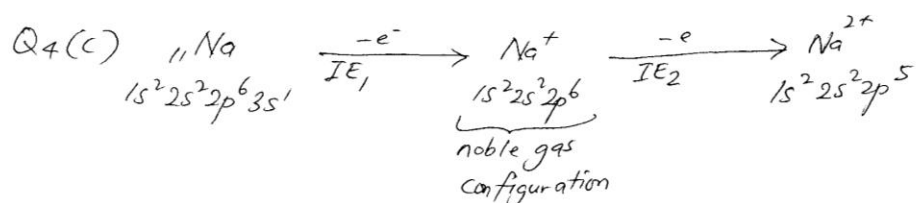
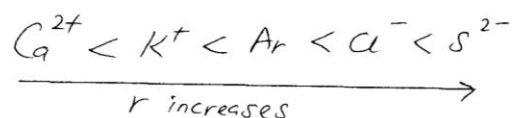


Sem 1 (2003/2004) Electronic Configuration.

Q4 (b) Ar,  $K^+$ ,  $Ca^{2+}$ ,  $S^{2-}$  and  $Cl^-$  = isoelectronic species.

Species	no. of $p^+$	no. of $e^-$	ratio $e/p$
$_{18}Ar$	18	18	1.000
$_{19}K^+$	19	18	0.947
$_{20}Ca^{2+}$	20	18	0.900
$_{16}S^{2-}$	16	18	1.125
$_{17}Cl^-$	17	18	1.060

If the ratio  $e/p$  is large, this will produce a longer radius species. (ie.  $ratio(e/p) \propto radius$ )



The second ionisation energy,  $IE_2$  is larger than the first ionisation energy,  $IE_1$ , because a lot of required to destroy the stable noble gas configuration.