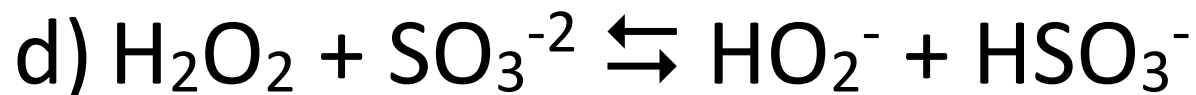
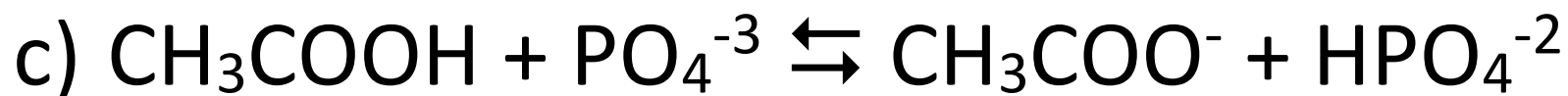
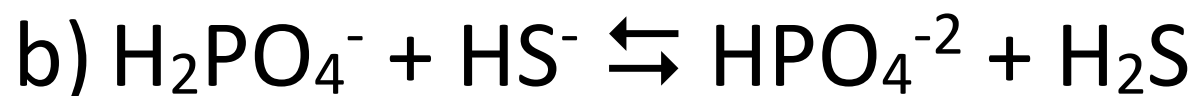
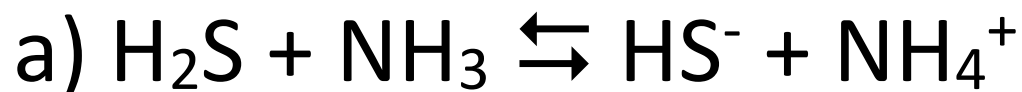


## Station 1:

In the following equilibria, predict whether reactants or products are favoured.



Station 2:

Write the major equilibrium reactions which occur when the following substances are placed in pure water.

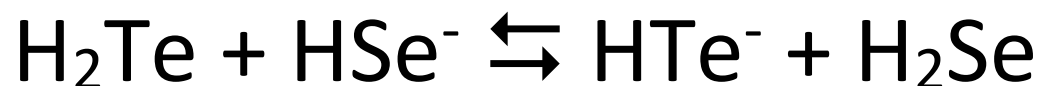
a)  $\text{HSO}_4^-$  and  $\text{NO}_2^-$

b)  $\text{HCO}_3^-$  and  $\text{HSO}_3^-$

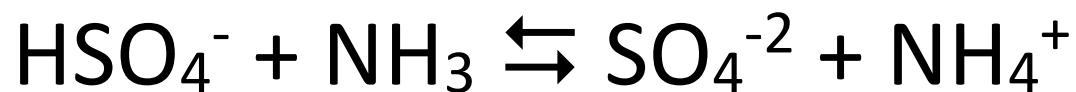
c)  $\text{HSO}_3^-$  and  $\text{HC}_2\text{O}_4^-$

Station 3:

a) If  $K_{eq} = 14$  for the equilibrium below, which acid is stronger:  $H_2Te$  or  $H_2Se$ ?

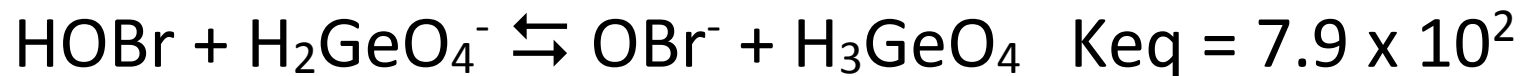


b) Will  $K_{eq}$  be greater than or less than 1 for:



Station 4:

Arrange the following four acids from strongest to weakest:



Station 5:

Given the following 3 acids:  $\text{H}_2\text{SO}_3$ ,  $\text{H}_3\text{PO}_4$ , and  $\text{HCOOH}$ , which would form an equilibrium with  $\text{F}^-$  where the reactants are favoured?