

## Friday Worksheet

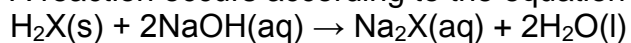
Name:

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### Volumetric 4

0.415 g of a pure acid,  $\text{H}_2\text{X}(\text{s})$ , is added to exactly 100 mL of 0.105 M  $\text{NaOH}(\text{aq})$ .

A reaction occurs according to the equation



The  $\text{NaOH}$  is in excess. This excess  $\text{NaOH}$  requires 25.21 mL of 0.197 M  $\text{HCl}(\text{aq})$  for neutralisation.

Calculate

i. the amount, in mol, of  $\text{NaOH}$  that is added to the acid  $\text{H}_2\text{X}$  initially.

ii. the amount, in mol, of  $\text{NaOH}$  that reacts with the acid  $\text{H}_2\text{X}$ .

iii. the molar mass, in  $\text{g mol}^{-1}$ , of the acid  $\text{H}_2\text{X}$