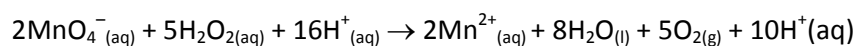


**Friday Worksheet**  
**Volumetric analysis worksheet 6**

**Name:** .....

1. **Volumetric Analysis** is an analytical technique that can be used for many different types of aqueous reactions other than acid/base reactions. Consider the following procedure.

To analyse the concentration of hydrogen peroxide in a sample of hair bleach a student placed 20.00 mL of the bleach in a 250.0 mL volumetric flask and made it up to the mark with distilled water. A 25.00 mL aliquot of the diluted bleach was then taken and titrated against 0.150 M acidified potassium permanganate solution ( $\text{KMnO}_4(\text{aq})$ ). The relevant equation for this reaction is given by:



- Give a balanced half equation for the oxidation reaction
- Give a balanced half equation for the reduction reaction
- If the average titre for the 25.00 mL aliquots was 28.35 mL. Calculate the molarity of the hydrogen peroxide in the **original sample** of hair bleach. Clearly show your workings out.