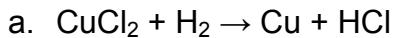


Exercises

1. Balance these chemical equations. (Each answer shows the correct coefficients in order.)



i. Check the Cl first



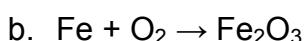
ii. Check Cu next



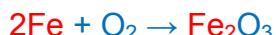
iii. Finally check H



iv. Check that there are no fractions



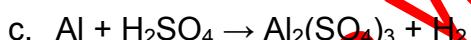
i. Check the Fe first



ii. Finally check O



iii. Check that there are no fractions



i. Check the S first



ii. Check O next



iii. Check Al next



iv. Finally check H



v. Check that there are no fractions



i. Check the Ca first



ii. Check C next



iii. Check O next

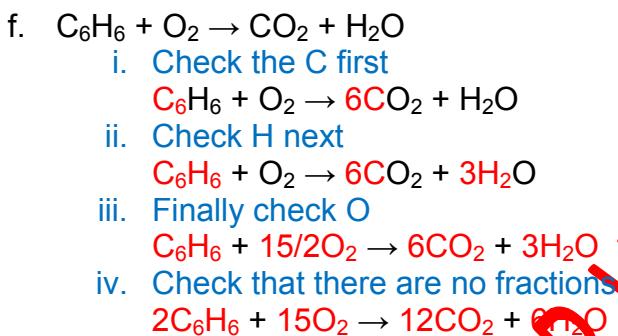
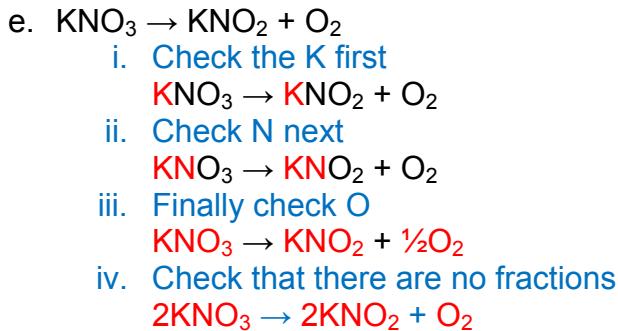


iv. Finally check H

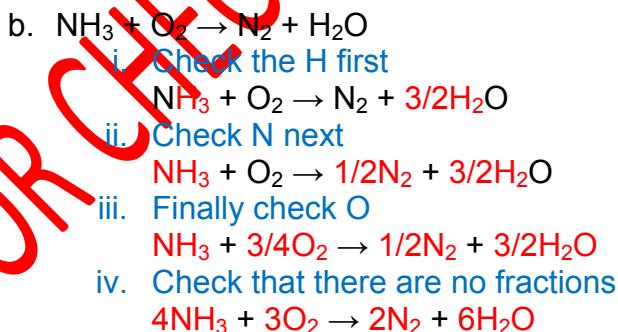
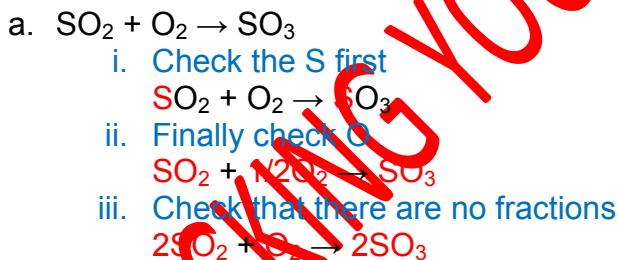


v. Check that there are no fractions

FOR CHECKING YOUR WORK ONLY



2. Balance these chemical equations.



- c. $\text{C}_4\text{H}_{10} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
- Check the C first
 $\text{C}_4\text{H}_{10} + \text{O}_2 \rightarrow 4\text{CO}_2 + \text{H}_2\text{O}$
 - Check H next
 $\text{C}_4\text{H}_{10} + \text{O}_2 \rightarrow 4\text{CO}_2 + 5\text{H}_2\text{O}$
 - Finally check O
 $\text{C}_4\text{H}_{10} + 13/2\text{O}_2 \rightarrow 4\text{CO}_2 + 5\text{H}_2\text{O}$
 - Check that there are no fractions
 $2\text{C}_4\text{H}_{10} + 13\text{O}_2 \rightarrow 8\text{CO}_2 + 10\text{H}_2\text{O}$
- d. $\text{Pb}(\text{NO}_3)_2 \rightarrow \text{PbO} + \text{NO}_2 + \text{O}_2$
- Check the Pb first
 $\text{Pb}(\text{NO}_3)_2 \rightarrow \text{PbO} + \text{NO}_2 + \text{O}_2$
 - Check N next
 $\text{Pb}(\text{NO}_3)_2 \rightarrow \text{PbO} + 2\text{NO}_2 + \text{O}_2$
 - Finally check O
 $\text{Pb}(\text{NO}_3)_2 \rightarrow \text{PbO} + 2\text{NO}_2 + 1/2\text{O}_2$
 - Check that there are no fractions
 $2\text{Pb}(\text{NO}_3)_2 \rightarrow 2\text{PbO} + 4\text{NO}_2 + \text{O}_2$
- e. $\text{Al} + \text{Fe}_3\text{O}_4 \rightarrow \text{Al}_2\text{O}_3 + \text{Fe}$
- Check the O first
 $\text{Al} + 3\text{Fe}_3\text{O}_4 \rightarrow 4\text{Al}_2\text{O}_3 + \text{Fe}$
 - Check Al next
 $8\text{Al} + 3\text{Fe}_3\text{O}_4 \rightarrow 4\text{Al}_2\text{O}_3 + \text{Fe}$
 - Finally check Fe
 $8\text{Al} + 3\text{Fe}_3\text{O}_4 \rightarrow 4\text{Al}_2\text{O}_3 + 9\text{Fe}$
 - Check that there are no fractions
- f. $\text{Sr} + \text{H}_2\text{O} \rightarrow \text{Sr}(\text{OH})_2 + \text{H}_2$
- Check the O first
 $\text{Sr} + 2\text{H}_2\text{O} \rightarrow \text{Sr}(\text{OH})_2 + \text{H}_2$
 - Check Sr next
 $\text{Sr} + 2\text{H}_2\text{O} \rightarrow \text{Sr}(\text{OH})_2 + \text{H}_2$
 - Finally check H
 $\text{Sr} + 2\text{H}_2\text{O} \rightarrow \text{Sr}(\text{OH})_2 + \text{H}_2$
 - Check that there are no fractions
- FOR CHECKING YOUR WORK ONLY*