

How to solve #1 on the Laverne Cox worksheet

HINTS FOR LAVERNE COX HOMEWORK

problem

- ① a) write the balanced equation
- b) convert $\text{H}_2\text{O grams}$ to $\text{H}_2\text{O moles}$. Put that on the 'before' line of your BCA table
- c) fill in the whole first line.
- d) the only ^{change} number you know so far is the change of water. Write the moles of H_2O in the change line.
- e) Now, go sideways on the change line using equations like

$$\text{xxx moles H}_2\text{O} \times \left(\frac{\text{moles H}_2}{\text{moles H}_2\text{O}} \right) =$$

$$\text{xxx moles H}_2\text{O} \times \left(\frac{\text{moles O}_2}{\text{moles H}_2\text{O}} \right) =$$

- f) fill in the 'After' line on your BCA by using addition and subtraction of the BEFORE line with the CHANGE line

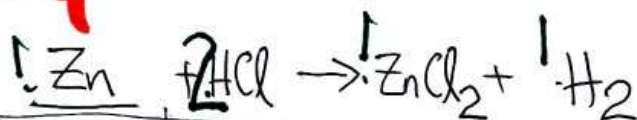
- g) They want the answer in grams so take a conversion of your ~~After~~ After Hydrogen moles to grams like this:

$$\text{xxx moles H}_2 \times \left(\frac{\text{grams H}_2}{\text{moles H}_2} \right) =$$

you're done!

How to solve #4 on the Laverne Cox worksheet

#4



B	0.0705	excess	ZERO	ZERO
C	-0.0705	-0.142	+0.0705	+0.0705
A	Zero	excess	.0705	0.0705

$$4.61 \text{ grams Zn} \times \left(\frac{1 \text{ mole Zn}}{65.38 \text{ gram Zn}} \right) = 0.0705 \text{ moles Zn}$$

Convert to grams.

$$0.0705 \text{ moles ZnCl}_2 \times \left(\frac{136.29 \text{ gram ZnCl}_2}{1 \text{ mole ZnCl}_2} \right) = 9.61 \text{ grams ZnCl}_2$$

Theoretical yield (on paper) = 9.61 gram

Actual yield = 8.56 grams

$$\frac{8.56}{9.61} \times 100 = 89.1\%$$