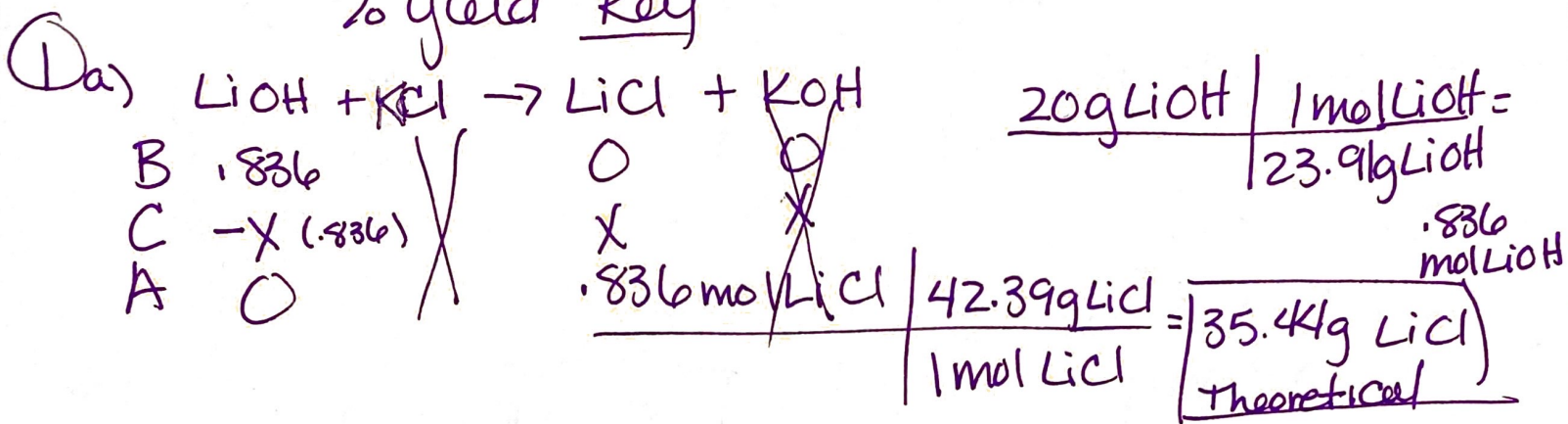
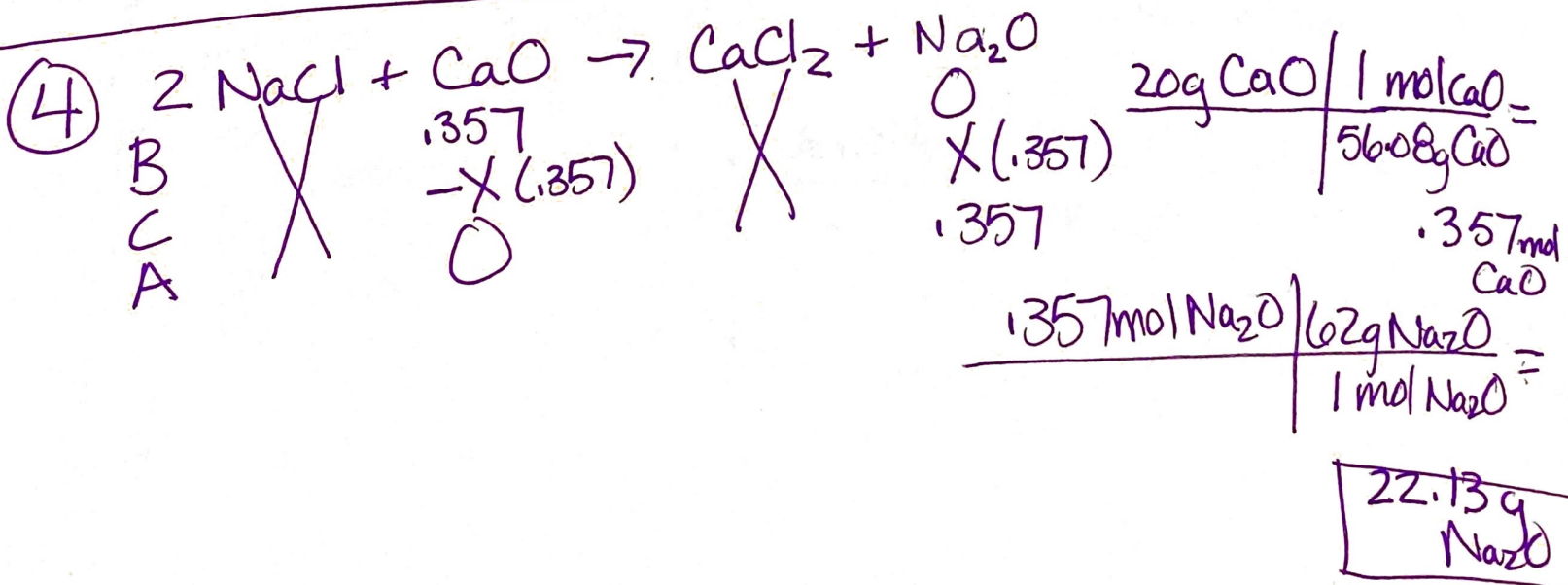
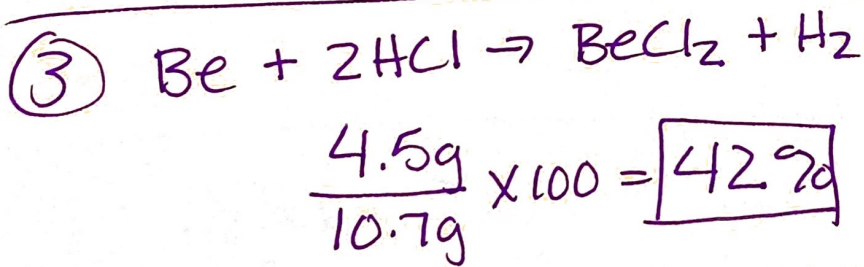
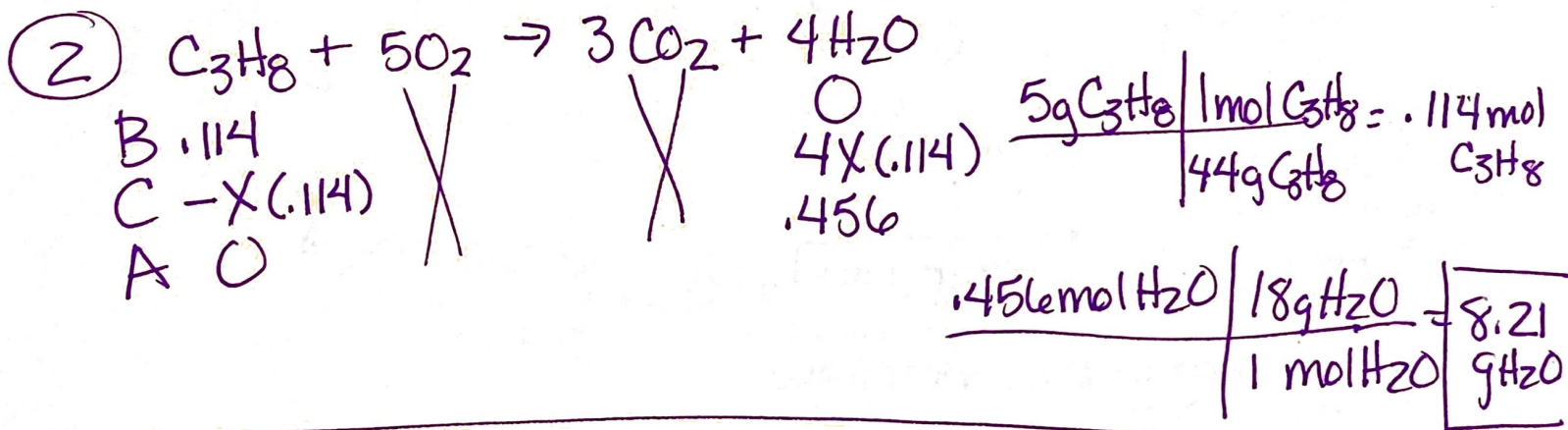
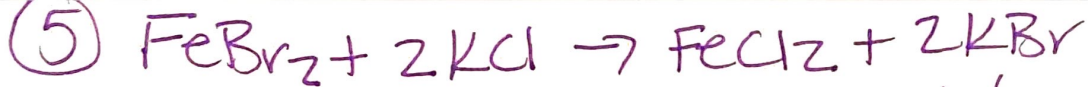


% yield Key



b) % yield = $\frac{\text{Act}}{\text{Theo}} \times 100 = \frac{6\text{g LiCl}}{35.44\text{g LiCl}} \times 100 = \boxed{16.93\%}$





a) B .158
C -X (.158)
A 0

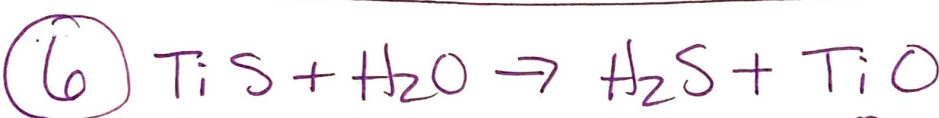
0
X (.158)
.158

$$\frac{34\text{g FeBr}_2}{215.65\text{g FeBr}_2} \Bigg| \frac{1\text{mol FeBr}_2}{215.65\text{g FeBr}_2} =$$

.158 mol
FeBr₂

b) $\frac{4\text{g}}{20.03\text{g}} \times 100 = \boxed{19.97\%}$

$$\frac{.158\text{mol FeCl}_2}{1\text{mol FeCl}_2} \Bigg| \frac{126.75\text{g FeCl}_2}{1\text{mol FeCl}_2} = 20.03\text{g FeCl}_2$$



B .250
C -X (.250)
A 0

0
X (.250)
.250

$$\frac{20\text{g TiS}}{79.94\text{g TiS}} \Bigg| \frac{1\text{mol TiS}}{79.94\text{g TiS}} = .250\text{mol TiS}$$

$$\frac{.250\text{mol TiO}}{1\text{mol TiO}} \Bigg| \frac{63.87\text{g TiO}}{1\text{mol TiO}} = 15.97\text{g TiO}$$

Theoretical

Actual = $\frac{22\text{g}}{15.97\text{g}} \times 100 = \boxed{137.76\%}$

way over 100% - something went wrong with the lab (not the problem!)



B .908
C -X (.908)
A 0

0
X (.908)
.908

$$\frac{89\text{g H}_2\text{SO}_4}{98.07\text{g H}_2\text{SO}_4} \Bigg| \frac{1\text{mol H}_2\text{SO}_4}{98.07\text{g H}_2\text{SO}_4} = .908\text{mol H}_2\text{SO}_4$$

$$\frac{.908\text{mol H}_2\text{O}}{1\text{mol H}_2\text{O}} \Bigg| \frac{18\text{g H}_2\text{O}}{1\text{mol H}_2\text{O}} = 16.34\text{g H}_2\text{O}$$

$$\frac{7.1\text{g}}{16.34\text{g}} \times 100 = \boxed{43.45\%}$$