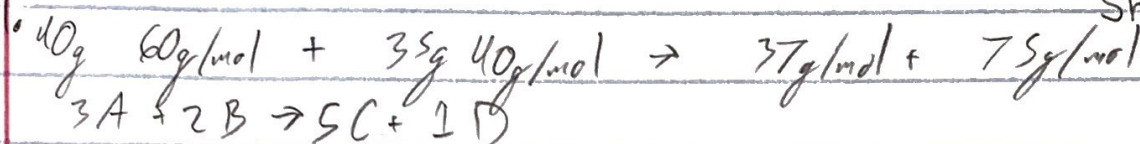


Part 1:



$\frac{40}{60} = \frac{.667}{3} = .222 \text{ mol } 3A$ $\frac{35}{40} = \frac{.875}{2} = .4375 \text{ mol } 2B$ limiting reactant is **A**

2.

40g A	1mol A	1mol D	75g D	(16.667g)
60g A	3mol A	1mol D	1mol D	
35g B	1mol B	1mol D	75g D	= 32.8125
40g B	2mol B	1mol D	1mol D	

$.222 \times 2 = .444 = 17.6g B$
 $35 - 17.6 = 17.4g$

Part II:



2. lead(II) iodide and potassium nitrate

3. $207.2 + 2(126.90)$

4. $\frac{9.22g \text{ } PbI_2}{461g} = 0.02 \text{ mol } PbI_2$

5. $0.22M = \frac{.022 \text{ mol}}{.1L}$ $.022 \text{ mol } Pb(NO_3)_2$ $\frac{.022 \text{ mol}}{1} = .022$

$0.56M = \frac{.056 \text{ mol}}{.1L}$ $.056 \text{ mol } KI$ $\frac{.056}{2} = .028$

$\frac{.022 \text{ mol}}{1 \text{ mol } PbI_2} = 10.142$ $\frac{9.22}{10.142} = 90.99\%$

Part III

1. $\frac{735 \text{ torr}}{760} = .967 \text{ atm} \times 1.01325 = 0.9799 \text{ bar}$

2. Pressure increases, Volume decrease which has an inverse relationship with pressure