



Moles Acid = Moles Base

$$n M l = n M l$$
$$(1) M (200 \text{ ml}) = (1) (0.2) (31.6 \text{ ml})$$

0.0316 M $\text{H}_2\text{C}_2\text{H}_3\text{O}_2$

20) ~~0.126 M~~ HClO₄ , 0.102 mole, — ml

$$\frac{0.126 \text{ mole HClO}_4}{2}$$

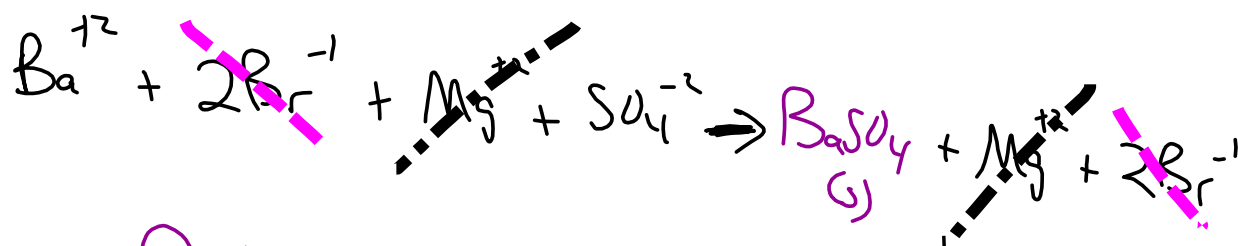
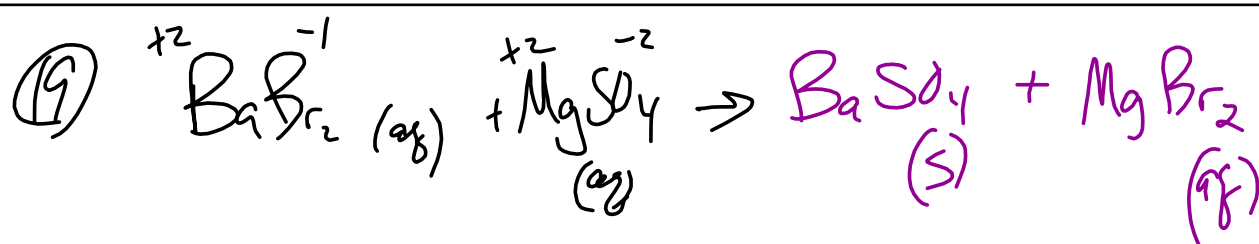
$$\frac{1 \cancel{x}}{0.126 \cancel{\text{mole HClO}_4}} \times \frac{0.102 \cancel{\text{mole HClO}_4}}{1 \cancel{x}} \times \frac{1000 \text{ ml}}{1 \cancel{x}} = 809.52 \text{ ml}$$

(18) $\underline{\quad}$ g Na_2SO_4 , (250ml) 0.1M Na_2SO_4

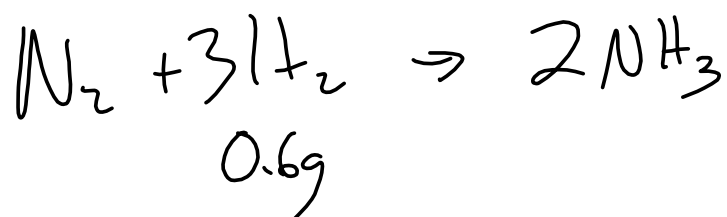
$\frac{0.1 \text{ mole } \text{Na}_2\text{SO}_4}{1 \text{ l}}$

$0.1 \text{ mole } \text{Na}_2\text{SO}_4$	0.25 l	$112.05 \text{ g } \text{Na}_2\text{SO}_4$
1 l		$1 \text{ mole } \text{Na}_2\text{SO}_4$

$= 3.55 \text{ g } \text{Na}_2\text{SO}_4$



②



0.6g H ₂	1 mole H ₂	2 mole NH ₃	17g NH ₃
	2g H ₂	3 mole H ₂	1 mole NH ₃

Supposes
= 3.4g NH₃

$$\% \text{yield} = \frac{0.0574}{3.4} \times 100 = 1.69\%$$