

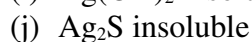
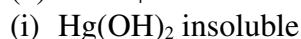
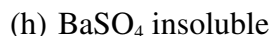
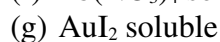
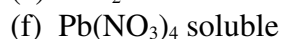
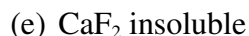
Year 11 Chemistry  
Ionic Solubilities and Equations  
Checkup

SOLUTIONS

1.



2.



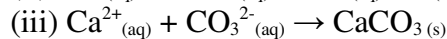
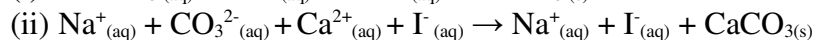
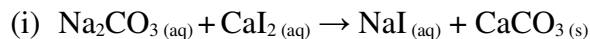
3.

- insoluble with hydroxide – cannot be potassium, sodium, ammonium, barium, and might not be calcium
- insoluble with sulfate – must be barium, lead(II), or maybe calcium or silver
- soluble with chromate – must be magnesium or calcium

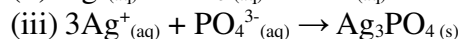
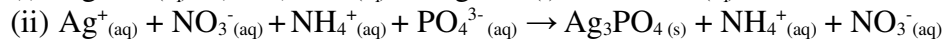
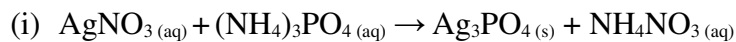
It is most likely to be calcium, since magnesium would be soluble with sulfate.

4.

(a)



(b)



Bonus:

A) We write it like (i). The formula  $\text{Cr}_2(\text{SO}_4)_3$  shows it is made up of three times as many sulfate ions as chromium ions. The ions do not form molecules when the substance dissolves.

B)  $\text{NaCl}$  is an ionic substance, so it already has ions that break apart in water.  $\text{HCl}$  is covalently bonded so its bond breaks and ions are formed.