### N35 – Ksp

# Will Something Precipitate?

Q < K <sub>sp</sub>	No precipitate yet! The solution is unsaturated. All ions are still dissociated.
Q = K <sub>sp</sub>	No precipitate yet! The solution is saturated. The maximum amount of ions are dissociated.
	A precipitate will form! The maximum amount of ions are already dissociated, so the extra will "crash out" as a solid precipitate.

\*Note\* Supersaturated solutions have  $Q > K_{sp}$  but a ppt hasn't crashed out yet because it was made at a higher temperature and slowly cooled down. It is unstable and the ppt will crash out once the sol'n is disturbed.

### N35 - Ksp

# Will Something Precipitate?

Q < K <sub>sp</sub>	No precipitate yet! The solution is unsaturated. All ions are still dissociated.
Q = K <sub>sp</sub>	No precipitate yet! The solution is saturated. The maximum amount of ions are dissociated.
	A precipitate will form! The maximum amount of ions are already dissociated, so the extra will "crash out" as a solid precipitate.

\*Note\* Supersaturated solutions have  $Q > K_{sp}$  but a ppt hasn't crashed out yet because it was made at a higher temperature and slowly cooled down. It is unstable and the ppt will crash out once the sol'n is disturbed.

#### N35 - Ksp

# Will Something Precipitate?

Q < K <sub>sp</sub>	No precipitate yet! The solution is unsaturated. All ions are still dissociated.
Q = K <sub>sp</sub>	No precipitate yet! The solution is saturated. The maximum amount of ions are dissociated.
Q > K <sub>sp</sub>	A precipitate will form! The maximum amount of ions are already dissociated, so the extra will "crash out" as a solid precipitate.

\*Note\* Supersaturated solutions have  $Q > K_{Sp}$  but a ppt hasn't crashed out yet because it was made at a higher temperature and slowly cooled down. It is unstable and the ppt will crash out once the sol'n is disturbed.

#### N35 - Ksp

# Will Something Precipitate?

Q < K <sub>sp</sub>	No precipitate yet! The solution is unsaturated. All ions are still dissociated.
Q = K <sub>sp</sub>	No precipitate yet! The solution is saturated. The maximum amount of ions are dissociated.
Q > K <sub>sp</sub>	A precipitate will form! The maximum amount of ions are already dissociated, so the extra will "crash out" as a solid precipitate.

\*Note\* Supersaturated solutions have  $Q > K_{\rm sp}$  but a ppt hasn't crashed out yet because it was made at a higher temperature and slowly cooled down. It is unstable and the ppt will crash out once the sol'n is disturbed.

### N35 – Ksp

## Will Something Precipitate?

Q < K <sub>sp</sub>	No precipitate yet! The solution is unsaturated. All ions are still dissociated.
	No precipitate yet! The solution is saturated. The maximum amount of ions are dissociated.
	A precipitate will form! The maximum amount of ions are already dissociated, so the extra will "crash out" as a solid precipitate.

\*Note\* Supersaturated solutions have  $Q > K_{so}$  but a ppt hasn't crashed out yet because it was made at a higher temperature and slowly cooled down. It is unstable and the ppt will crash out once the sol'n is disturbed.

#### N35 – Ksp

# **Will Something Precipitate?**

Q < K <sub>sp</sub>	No precipitate yet! The solution is unsaturated. All ions are still dissociated.
Q = K <sub>sp</sub>	No precipitate yet! The solution is saturated. The maximum amount of ions are dissociated.
	A precipitate will form! The maximum amount of ions are already dissociated, so the extra will "crash out" as a solid precipitate.

\*Note\* Supersaturated solutions have  $Q > K_{sp}$  but a ppt hasn't crashed out yet because it was made at a higher temperature and slowly cooled down. It is unstable and the ppt will crash out once the sol'n is disturbed.

### N35 - Ksp

# Will Something Precipitate?

Q < K <sub>sp</sub>	No precipitate yet! The solution is unsaturated. All ions are still dissociated.
Q = K <sub>sp</sub>	No precipitate yet! The solution is saturated. The maximum amount of ions are dissociated.
	A precipitate will form!

\*Note\* Supersaturated solutions have Q >  $K_{sp}$  but a ppt hasn't crashed out yet because it was made at a higher temperature and slowly cooled down. It is unstable and the ppt will crash out once the sol'n is disturbed.

### N35 - Ksp

## Will Something Precipitate?

Q < K <sub>sp</sub>	No precipitate yet! The solution is unsaturated. All ions are still dissociated.
Q = K <sub>sp</sub>	No precipitate yet! The solution is saturated. The maximum amount of ions are dissociated.
Q > K <sub>sp</sub>	A precipitate will form! The maximum amount of ions are already dissociated, so the extra will "crash out" as a solid precipitate.

\*Note\* Supersaturated solutions have  $Q > K_{\rm sp}$  but a ppt hasn't crashed out yet because it was made at a higher temperature and slowly cooled down. It is unstable and the ppt will crash out once the sol'n is disturbed.