

Salts and Solubility Activity 5

Learning Goal for 5: Students will be able to predict what would be observed on a macroscopic and microscopic level for salts with varying ionic charge given the K_{sp} .

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1. Which will have more dissolve particles in a saturated solution?

$$K_{sp} = 3 \times 10^{-13}$$

A compound made from

A. XY



B. XY₂

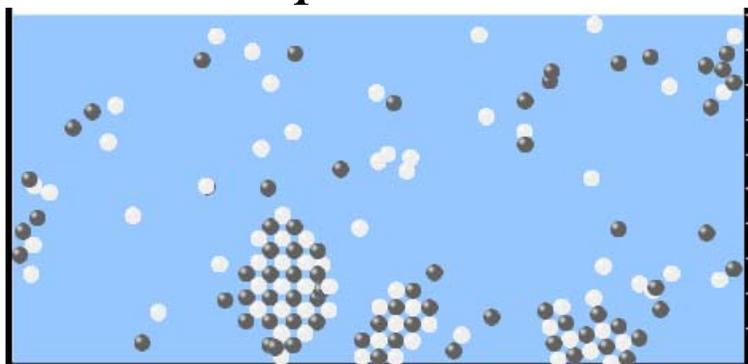


C. no difference

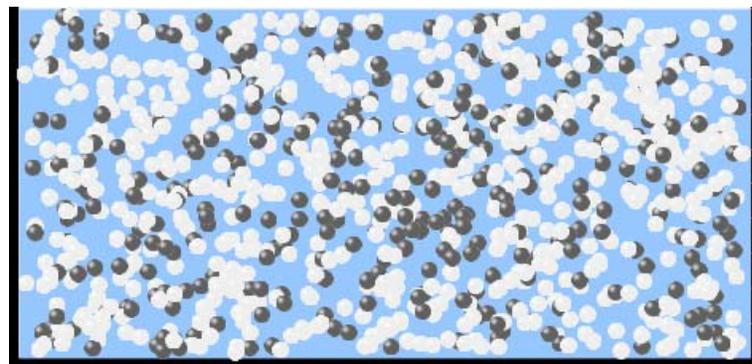
Answer to 1

$$A. K_{sp} = x^2; x = 5E - 7$$

$$B. K_{sp} = (x)(2x)^2; x = 4E - 5$$



XY



XY₂

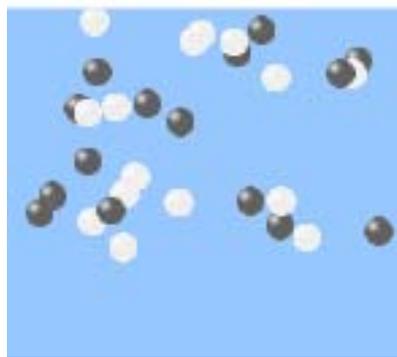
Why doesn't the mass of the
particle matter?

2. Which will have more dissolve particles in a saturated solution?

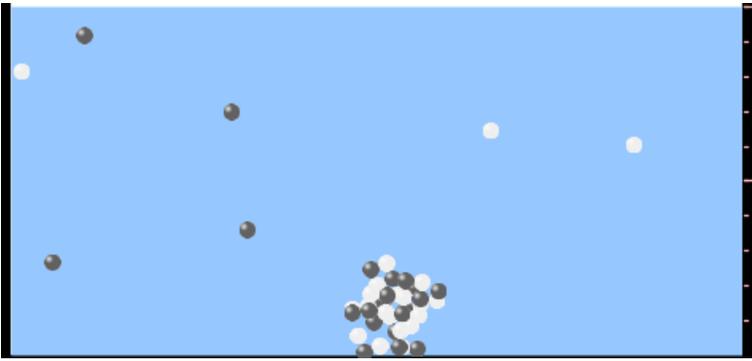
$$K_{sp} = 2 \times 10^{-15}$$

A compound made from

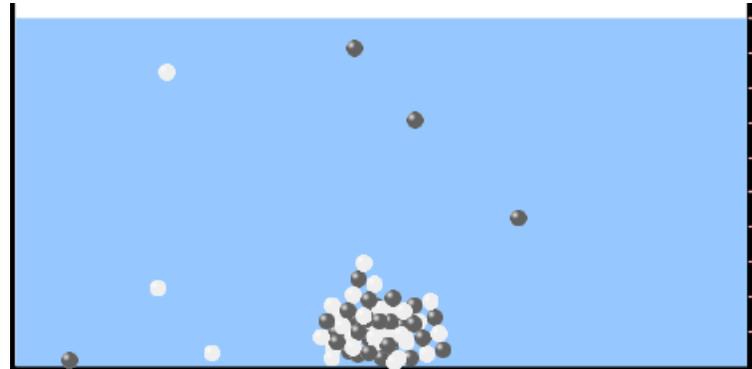
A. X^{+1} and Y^{-1} B. X^{+2} and Y^{-2} C. no difference



Answer to 2



XY



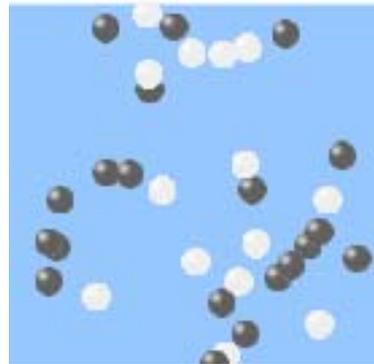
XY

3. Which will have more dissolve particles in a saturated solution?

$$K_{sp} = 2 \times 10^{-15}$$

A compound made from

A. X^{+2} and Y^{-2} B. X^{+2} and Y^{-3} C. no difference

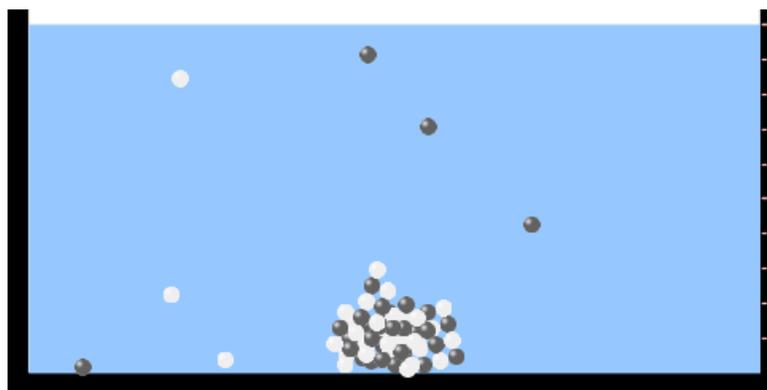


Answer to 3

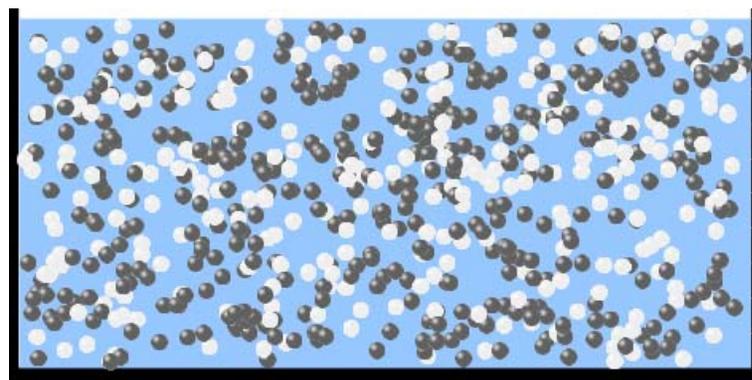
$$A. K_{sp} = x^2; x = 4E - 8$$

$$B. K_{sp} = (3x)^3 (2x)^2; x = 5E - 4$$

If you run the sim at the default volume, you cannot get the second compound to ppt, but only 4 dissolve of the first.



XY



X_3Y_2