

PS11

③ Ar } HI } HCl

Weakest

⑤ Ion-Dipole

* Ionic in water * Aqueous soln

$$\left(\begin{array}{c} \text{NaCl} \\ \text{Na}^+ \text{Cl}^- + \text{H}_2\text{O} \end{array} \right)$$

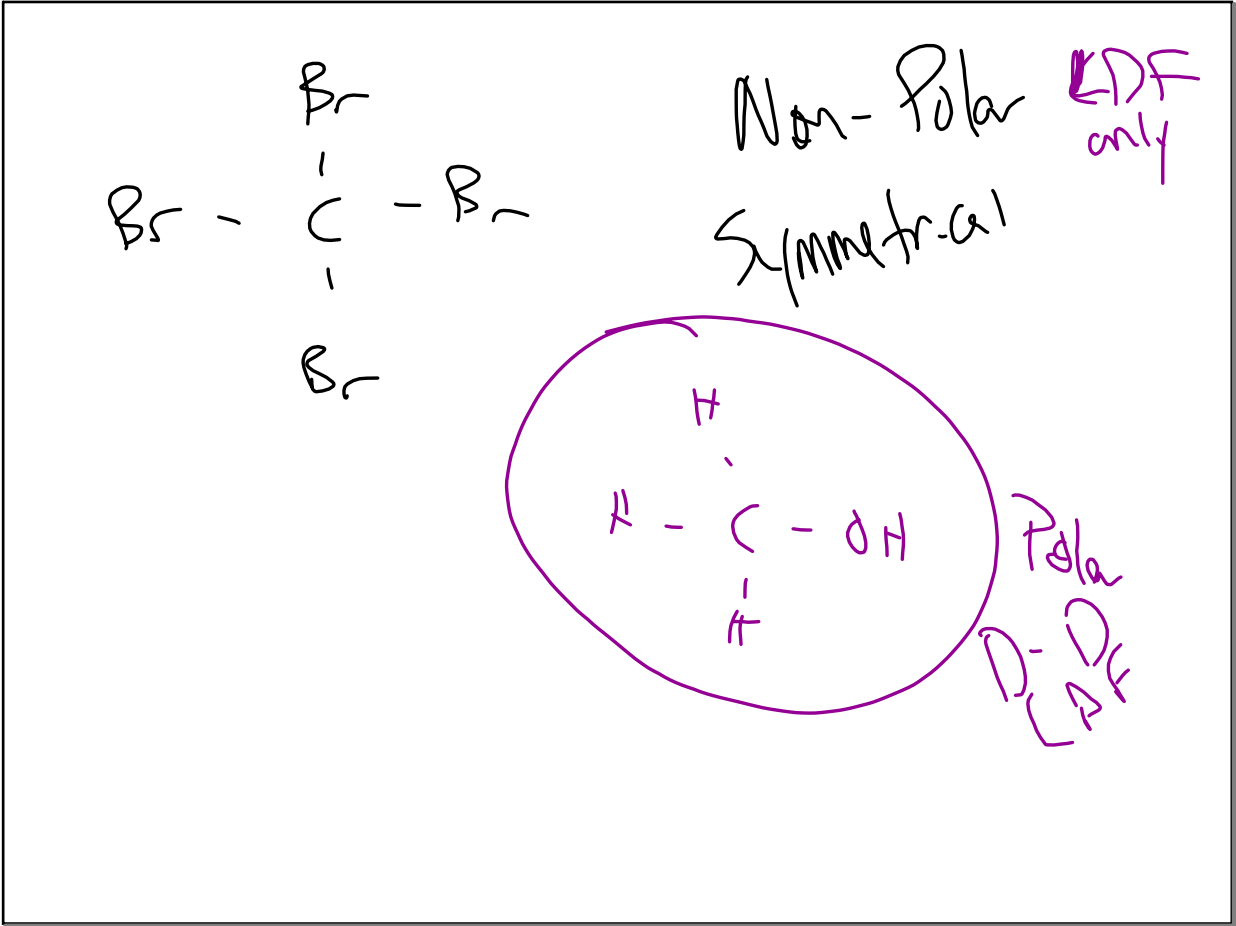
Jan 2-7:44 AM

H₂O

! POLAR!

(CS₂)

Jan 2-8:35 AM



Jan 2-8:50 AM

23 $H_f = 6.01 \text{ kJ/mole}$

$c = \text{H}_2\text{O}(l) \quad 75.2 \text{ J/mole}\cdot\text{K}$

50g $\text{H}_2\text{O}(s)$
ice

$0^\circ \text{C} \rightarrow 22^\circ \text{C}$

$\Delta T = 22^\circ \text{C}$
 $\Delta T = 22 \text{ K}$

KJ?

6.01 kJ	$1 \text{ mole H}_2\text{O}$	$50 \text{ g H}_2\text{O}$
$\text{mole H}_2\text{O}$	$18 \text{ g H}_2\text{O}$	16.7 kJ

75.2 J	22 K	$1 \text{ mole H}_2\text{O}$	$50 \text{ g H}_2\text{O}$	1 kJ
$\text{mole}\cdot\text{K}$		$18 \text{ g H}_2\text{O}$		$1000 \text{ J} = 4.6 \text{ kJ}$

Jan 2-9:09 AM

21) 10 KJ heat
15.5 g ice $H_2O(s)$
 $-5^\circ C \rightarrow ?^\circ C$

$H_f = 6.01 \text{ KJ/mole}$
 $C = 75.2 \text{ J/mole} \cdot K$

① -5 to $0^\circ C$

75.2 J	5 K	1 mole	15.5 g ice
mole K		18 g	

$= 0.324 \text{ KJ}$

② melt at $0^\circ C$

6.01 KJ	1 mole	15.5 g ice
Melt	18 g	

$= 5.175 \text{ KJ to melt}$

③ 4.501 KJ to heat liquid from $0^\circ C \rightarrow ?^\circ C$

mole K	4501 J	18 g	15.5 g
75.2 J			

$= 69.5^\circ C$

10.000
- 0.324
9.676 kJ
- 5.175
4.501 KJ

DT
69.5°C

Jan 2-9:17 AM