PURPOSE: WHAT DOES IMF DO FOR MIXIBILITY?

(#1) "LIKE DISSOLVES LIKE"

This means that
polar substances dissolve other polar substances,
and...
nonpolar substances dissolve other nonpolar substances.

(#2) DISSOLVERS OF THINGS

POLAR	NON POLAR
WATER	Carbon dioxide

clothes stained with	wash it out with
NaCl (0.9 3.0 POLAR!)	water
caffeine non polar	CO_2
tomato stain non polar	CO_2

rank these by their forces

CλeMis+ry: http://genest.weebly.com

Stop in for help every day at lunch and Tues, Wed., & Thurs after school!

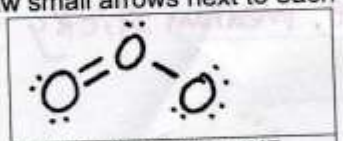
After-hours question? Email me at home: eagenest@madison.k12.wi.us

answers

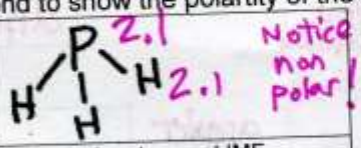
Name_____

Period_____

1. Draw small arrows next to each bond to show the polartity of the bond.



What is the strongest IMF present in *this* molecule?
- [x] just van der Waals
- [ ] dipole
- [ ] hydrogen bonding



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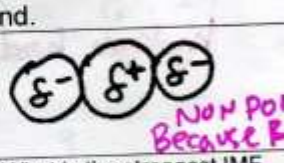

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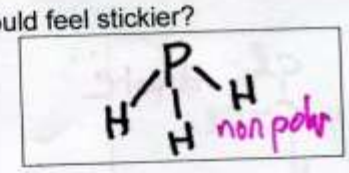
2. Match the type of intermolecular force with the correct definition:

a. Z van der Waals force
b. Y Dipole Interactions
c. X Hydrogen Bonding

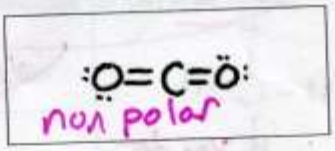
x. the strongest type of intermolecular force
y. the medium strength intermolecular force
z. the weakest intermolecular force

FIRST, CIRCLE THE MOLECULE WITH STRONGER IMF.
Then, answer the following questions by drawing a <, = , or > symbol.

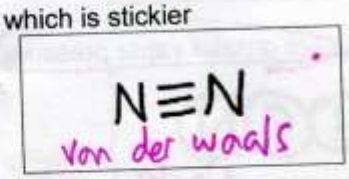
3. Which would feel stickier?



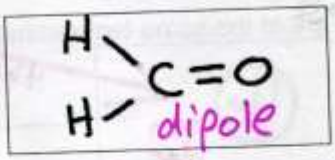
=



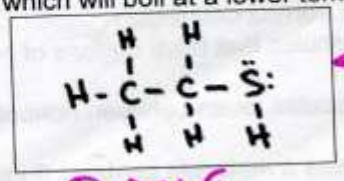
4. Compare which is stickier



<

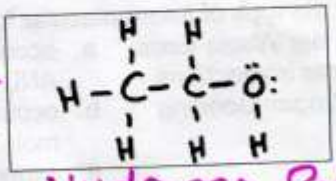


5. Compare: which will boil at a lower temperature?



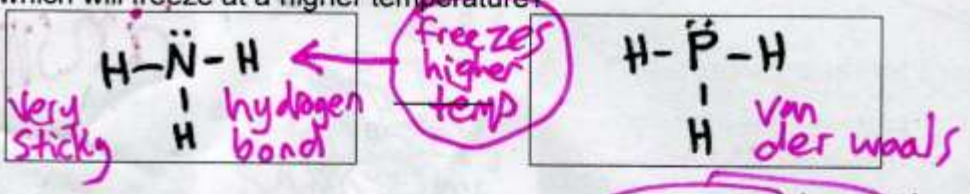
DIPOLE

← Boils at Lower temp.

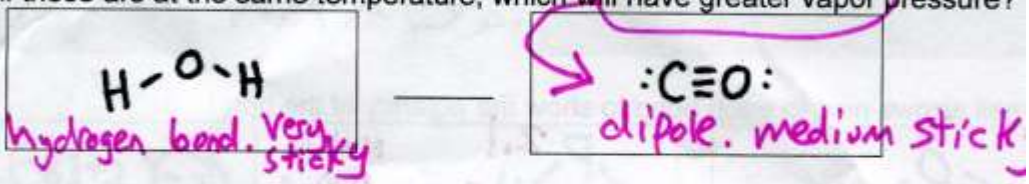


Hydrogen Bonding! very sticky

re: which will freeze at a higher temperature?

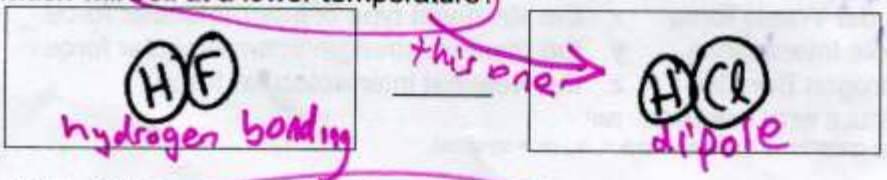


re: if these are at the same temperature, which will have greater vapor pressure?

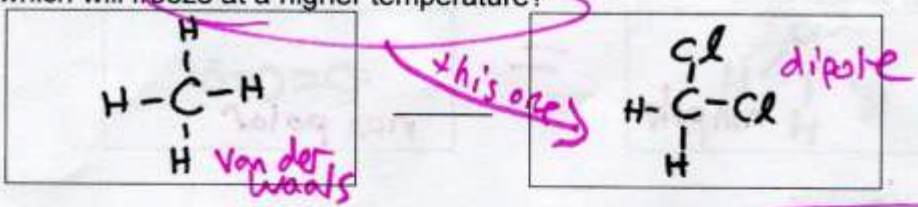


re: which has greater viscosity

re: which will boil at a lower temperature?



e: which will freeze at a higher temperature?



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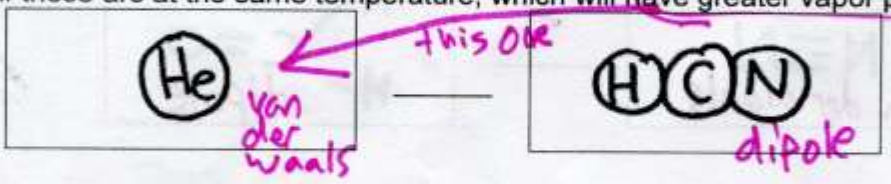

12. Match the type of intermolecular force with the correct definition:

B	van der Waals force	a. occurs in all molecules that have regions of (+) AND (-) charge
A	Dipole Interactions	b. occurs in all molecules, even between nonpolar molecules
C	Hydrogen Bonding	c. cannot occur unless a molecule contains fluorine, nitrogen, or oxygen