

Notes

• What is the HONC 1234 rule?

• Is there a trend on the P.T. for # of bonds?

H has 1 bond always

O has 2 bonds

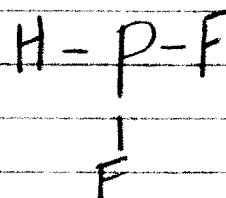
N has 3 bonds

C has 4 bonds

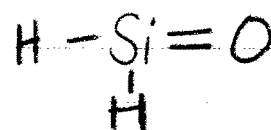
Yes! 😊

•C•	•N•	•O•	•F•	•Ne•
↓	↓	↓	↓	↓
Si Ge	P As Sb	S Se Te Po	Cl Br I At	
4	3	2	1	0

(ex) PHF_2



(ex) SiH_2O



Hint: If too many H's
with single bonds
↓
try double bonding

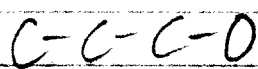
Activity: HONC If You Like Molecules

(ex) C_3H_8O

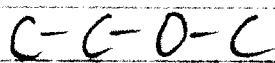
1. Connect carbons 1st



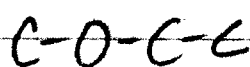
2. Insert O atom either on an end C or in the middle somewhere



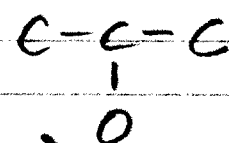
↓ same



↓ same

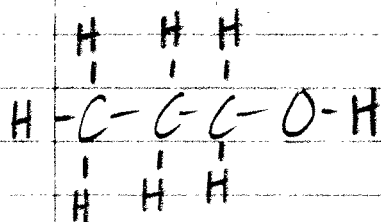
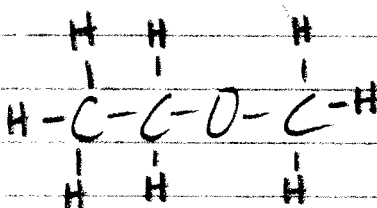
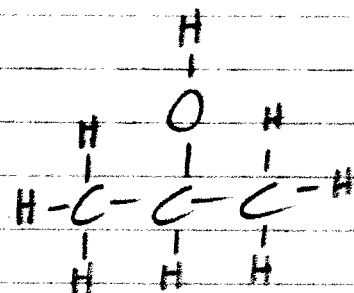


↓ same



(This formula has 3 isomers!)

3. Add H's last

 C_3H_8O ✓ C_3H_8O ✓ C_3H_8O ✓4. Check that HONC 1234 is obeyed
& check that it matches the formula

Questions:

1. Draw 1 structural formula for C_3H_8
2. Draw 2 unique struct. form. for C_2H_6O
3. Draw 2 unique struct. form. for C_3H_9N
(There are 4 unique structures)
4. Draw 2 unique struct. form. for $C_2H_4O_2$
5. One molec. in #4 is putrid smelling & the other is sweet. Which is which?

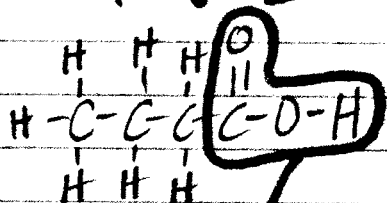
Making Sense Notes

• What is an isomer?

• Cpd's that have the same formula but different structures

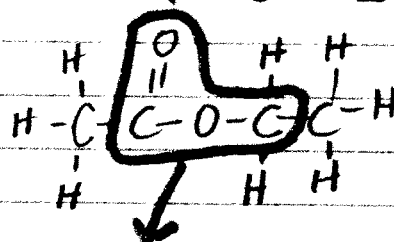
* Vials G & H are isomers!

VIAL G



carboxylic
acid

VIAL H



ester

• isomers have different properties!