

groups and bonds | $\frac{4A}{0 \text{ pairs}}$ | $\frac{5A}{1 \text{ pair}}$ | $\frac{6A}{2 \text{ pair}}$ | $\frac{7A}{3 \text{ pair}}$ | $\frac{8A}{4 \text{ pair}}$

Name _____

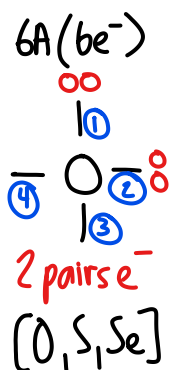
Period _____

College Prep Chemistry of the Earth

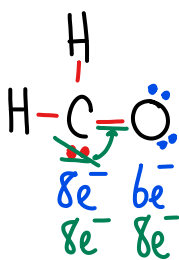
Assignment 3F – Multiple Covalent Bonding

20 Points

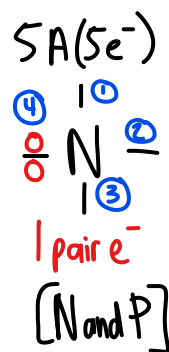
Complete the following covalent molecules with single bonds using structural formulas



O ₂ (1 double O-O bond)	S ₂ (1 double S-S bond)	CO ₂ (2 double C-O bonds)
$4+4=8$ $2 \text{ bonds} = 4e^-$ $4+4=8$ $[: \ddot{O} = \ddot{O} :]$	S S	O C O



H ₂ CO (2 single H-C bonds) (1 double C-O bond)	H ₂ CS (2 single H-C bonds) (1 double C-S bond)	CS ₂ (2 double C-S bonds)
 $[H - \overset{H}{\underset{H}{C}} = \ddot{O} :]$	H H C S	S C S



N ₂ (1 triple N-N bond)	N ₂ (1 triple P-P bond)	HCN (1 single H-C bond) (1 triple C-N bond)
$6+2=8$ $3 \text{ bonds} = 6e^-$ $6+2=8$ 	P P	$4 \text{ bonds} = 8e^-$ $6+2=8$

HCSF (1 single C-H bond) (1 double C-S, 1 single C-F)	HNO (1 single H-N bond) (1 double N-O bond)	PSCl (1 single P-Cl bond) (1 double P-S bond)
F H C S	H N O	Cl P S