Dougherty Valley HS Chemistry

Bonding and Structure – Lewis St. Multiple Bonds, & Mixed

## Name:

Period: Seat#:

Worksheet #6

Answer	the	following	q	uestions:

1)	What are the common elements that can break the octet rule? List them as well as indicate how many e- each can be satisfied with.			2)	What is an expanded Octet?				
3)	How many electrons are being shared in a single bond? In a double bond? In a triple bond?	4)	What are the step Structure? Make s triple bonds.	s yo sure	ou need to follow in order to draw a Lewis you explain how we go about doing double or				

## Draw the Lewis Structure for the following molecules:

Molecule	Lewis Structure	Description		Molecule	Lewis Structure	Description	
5) HCN		# of Single Bonds	# of Double Bonds	6) Carbonate Ion		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs
7) C <sub>2</sub> N <sub>2</sub>		# of Single Bonds	# of Double Bonds	8) OCN <sup>-</sup>		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs
9) NO <sub>2</sub> -		# of Single Bonds	# of Double Bonds	10) N <sub>2</sub> H <sub>2</sub>		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs

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	# of Single	# of Double			# of Single	# of Double
	# 01 Single Bonds	# Of Double Bonds			# 01 Siligie Bonds	# Of Double Bonds
	Donas	Donas			Donas	Donas
11) C₂H₄			12) F₃NO			
-			, -			
				-		
# Valence	# of Triple	# of	# Valence		# of Triple	# of
electrons	Bonds	Lone Pairs	electrons		Bonds	Lone Pairs
					1	
	# of Single	# of Double			# of Single	# of Double
	Bonds	Bonds	4.43		Bonds	Bonds
			14)			
13) H₂CO			Phosphate		1	
			lon			
			-			
	# of Tainle	4 - 6		-	# of Tairala	<i>µ</i> - f
# Valence	# of Triple	# Of	# Valence		# of Triple	# Of
electrons	Bonus	Lone Pairs	electrons		Bonus	Lone Pairs
	# of Single	# of Double			# of Single	# of Double
	Bonds	Bonds			Bonds	Bonds
15) CIO -			16) UDr			
15) CIU <sub>3</sub>			то) пы			
# Valence	# of Triple	# of	# Valence		# of Triple	# of
	Bonds	Lone Pairs			Bonds	Lone Pairs
electrons			electrons			
	# of Circula	# of Double			# of Circula	# of Double
	# of Single	# of Double			# of Single	# of Double
	DUTIUS	Bollus			Borius	Bollus
17) CO			18) NO₃ <sup>-</sup>			
,			,			
					L	
# Valence	# of Triple	# of	# Valence		# of Triple	# of
electrons	Bonds	Lone Pairs	electrons		Bonds	Lone Pairs
	# of Single	# of Double			# of Single	# of Double
	Bonds	Bonds			Bonds	Bonds
19) SO <sub>2</sub>			20) CF <sub>4</sub>			
				4		
# Valence	# of Triple	# of	# Valence		# of Triple	# of
electrons	Bonds	Lone Pairs	electrons		Bonds	Lone Pairs