

Name: _____

Period: _____

Seat#: _____

Answer the following questions:

<p>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.</p>	<p>2) What is an expanded Octet?</p>
<p>3) How many electrons are being shared in a single bond? In a double bond? In a triple bond?</p>	<p>4) What are the steps you need to follow in order to draw a Lewis Structure? Make sure you explain how we go about doing double or triple bonds.</p>

Draw the Lewis Structure for the following molecules:

Molecule	Lewis Structure	Description		Molecule	Lewis Structure	Description	
		# of Single Bonds	# of Double Bonds			# of Single Bonds	# of Double Bonds
5) HCN				6) Carbonate Ion			
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs
7) C₂N₂		# of Single Bonds	# of Double Bonds	8) OCN⁻		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs
9) NO₂⁻		# of Single Bonds	# of Double Bonds	10) N₂H₂		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs

Dougherty Valley HS Chemistry

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

11) C₂H₄		# of Single Bonds	# of Double Bonds	12) F₃NO		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs
13) H₂CO		# of Single Bonds	# of Double Bonds	14) Phosphate Ion		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs
15) ClO₃⁻		# of Single Bonds	# of Double Bonds	16) HBr		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs
17) CO		# of Single Bonds	# of Double Bonds	18) NO₃⁻		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs
19) SO₂		# of Single Bonds	# of Double Bonds	20) CF₄		# of Single Bonds	# of Double Bonds
# Valence electrons		# of Triple Bonds	# of Lone Pairs	# Valence electrons		# of Triple Bonds	# of Lone Pairs