

NAME: \_\_\_\_\_

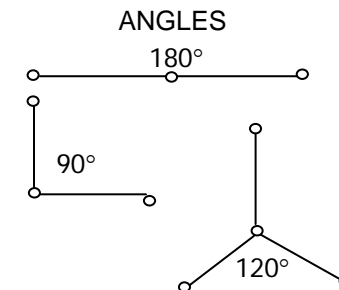
#: \_\_\_\_\_ PERIOD: \_\_\_\_\_

DATE: \_\_\_\_\_

**CHEMISTRY - MOLECULAR GEOMETRY ACTIVITY**

<b>1. TWO BONDED PAIRS</b>	Bond Angle:	<b>1 UNSHARED PAIR OF ELECTRONS</b> ↓									
	Geometry:										
	Type:										
<b>2. THREE BONDED PAIRS</b>	Bond Angle:		Bond Angle:	<b>2 UNSHARED PAIR OF ELECTRONS</b> ↓							
	Geometry:		Geometry:								
	Type:		Type:								
<b>3. FOUR BONDED PAIRS</b>	Bond Angle:		Bond Angle:		Bond Angle:	<b>3 UNSHARED PAIR OF ELECTRONS</b> ↓					
	Geometry:		Geometry:		Geometry:						
	Type:		Type:		Type:						
<b>4. FIVE BONDED PAIRS</b>	Bond Angle:		Bond Angle:		Bond Angle:		Bond Angle:	<b>4 UNSHARED PAIR OF ELECTRONS</b> ↓			
	Geometry:		Geometry:		Geometry:		Geometry:				
	Type:		Type:		Type:		Type:				
<b>5. SIX BONDED PAIRS</b>	Bond Angle:		Bond Angle:		Bond Angle:		Bond Angle:		Bond Angle:		
	Geometry:		Geometry:		Geometry:		Geometry:		Geometry:		Geometry:
	Type:		Type:		Type:		Type:		Type:		Type:

TYPE of Structure  
Description:  
M=Central Atom  
X=Substituent Atom  
E=Lone Pair Electrons



- Draw a diagram of each of the geometries possible in the box provided.
- List the Bond Angles and Geometries and Type of Structure
- How many atoms are bonded to the central atom in a molecule that has:
  - a linear shape \_\_\_
  - a trigonal planar shape \_\_\_
  - a tetrahedral shape \_\_\_
  - a trigonal bipyramidal shape \_\_\_
  - an octahedral shape \_\_\_?
- What other geometries are possible due to lone pairs \_\_\_\_\_?
- What is the maximum bond angle for any geometry? \_\_\_\_\_° What is the minimum bond angle for any geometry? \_\_\_\_\_°  
What influences restrict the maximum and minimum bond angles? \_\_\_\_\_
- Under what conditions is it possible to have the same geometry but different number of electrons? \_\_\_\_\_  
Give two examples: \_\_\_\_\_