Name_____Period_____

The Chemistry of Carbon

What are organic compounds?

1. What does “organic” mean at the grocery store? _____

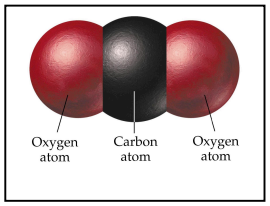
_____

2. What does “organic” mean in terms of organic chemistry? _____

_____

3. Organic compounds are ones that contain bonds between _____ atoms.

4. Is carbon dioxide, also known as CO_2 , an organic compound? Why or why not?



_____

_____

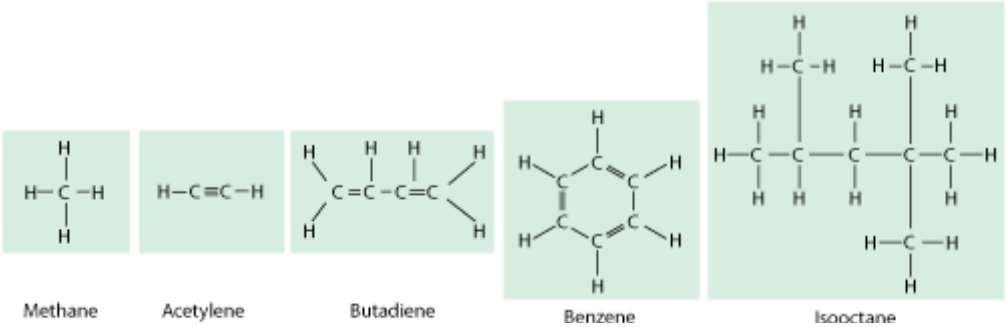
Why is carbon so special?

5. Carbon can form strong _____ between many different important elements, like

_____, _____,_____, phosphorus, and sulfur.

6. Because it has 4 electrons to share, it is very _____, meaning it can make molecules in lots of sizes, shapes, and arrangements.

7. Look at the carbon molecules below. How many bonds does each carbon make? _____



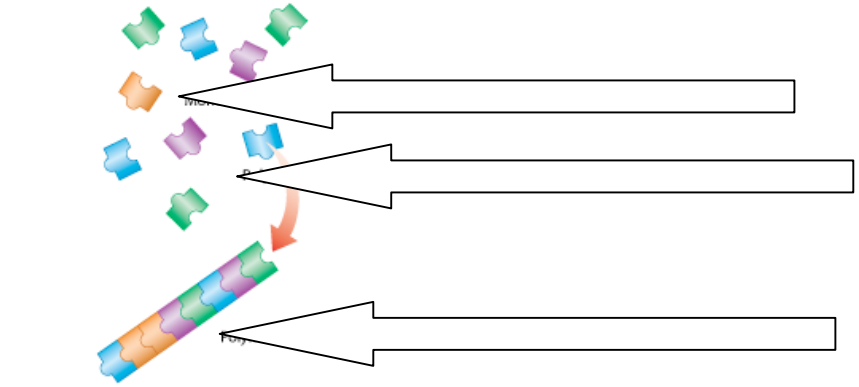
What is a macromolecule?

8. Many of the organic compounds in cells are so large that they are known as _____

9. Macromolecules are made from thousands of small parts called _____,

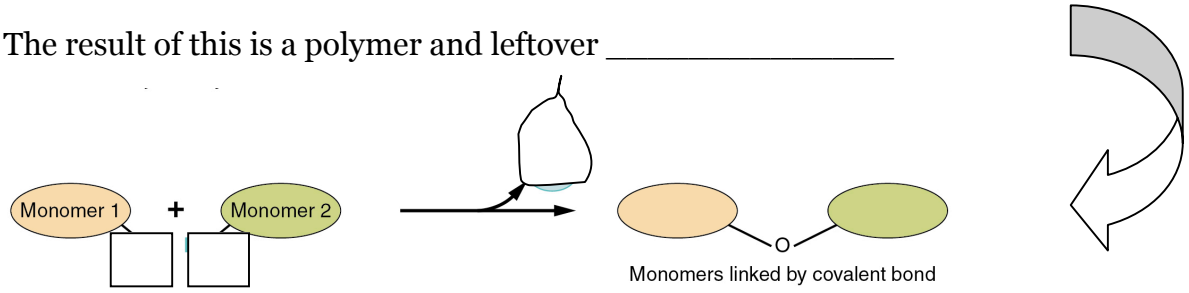
which can be linked together to form a _____ in a process called _____

10. Label the diagram below with the words you used in #9.

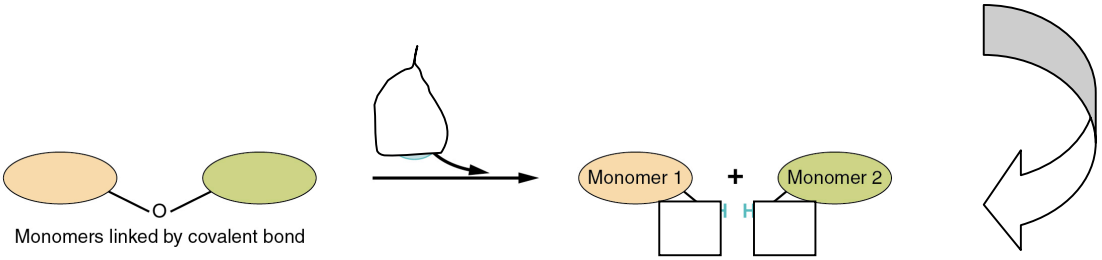


11. During polymerization, monomers are often joined together by _____.

The result of this is a polymer and leftover _____



12. If polymers every need to be split, they can be cut by _____.



13. Macromolecules are placed into groups based on their _____.

The four types of macromolecules are _____ _____

_____ _____