

Name \_\_\_\_\_

Date \_\_\_\_\_

Period \_\_\_\_\_

## Formulas

1. Explain the difference between a molecular formula and an empirical formula. \_\_\_\_\_

\_\_\_\_\_

2. Write the empirical formula for each of the following:

a.  $C_6H_{12}O_6$  \_\_\_\_\_

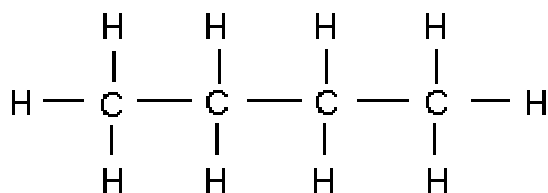
b.  $O_2F_2$  \_\_\_\_\_

c.  $P_4O_6$  \_\_\_\_\_

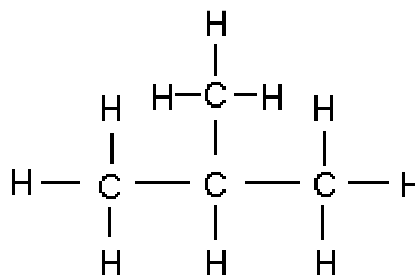
d.  $C_2H_6O_2$  \_\_\_\_\_

e.  $C_2H_4O_2$  \_\_\_\_\_

f.  $C_7H_{15}COOH$  \_\_\_\_\_



butane



methylpropane

3. Write the molecular formula for butane. \_\_\_\_\_

4. Write the molecular formula for methylpropane. \_\_\_\_\_

5. Compound X has been found to contain twice as many hydrogen atoms as carbon atoms and no other elements.

a. Write the empirical formula for compound X. \_\_\_\_\_

b. Of the molecular formulas in the box below, which ones could possibly represent compound X?

\_\_\_\_\_

6. Compound Y has been found to contain elements in the following ratio: 3 carbon atoms : 6 hydrogen atoms : 1 oxygen atoms.

a. Write the empirical formula for compound Y. \_\_\_\_\_

b. Of the molecular formulas in the box below, which ones could possibly represent compound Y?

\_\_\_\_\_

$CH_3$	$C_5H_{10}$	$C_6H_{12}O_2$		
$C_{12}H_{26}$	$C_{11}H_{22}$	$C_2H_4$		
$C_{10}H_{20}O_3$	$CH_4$	$C_4H_6$	$CH_2$	