

# Molecular Formula Worksheet

Directions: Answer in the space provided and please show all your work.

1. Dichloroacetic acid is corrosive to the skin and is sometimes used to remove skin blemishes. It has a molar mass of 129 g/mol and the empirical formula is  $\text{CHOCl}$ . What is its molecular formula?
2. A compound has an empirical formula of  $\text{C}_5\text{H}_{11}$ . If 0.0275 mol of the compound has a mass of 3.91g, what is the molecular formula?
3. A gas has an empirical formula of  $\text{CH}_2$ . AT STP, 0.500 L of the gas has a mass of 0.938 g, find the molecular formula of the gas?
4. A sample of gas with a mass of 0.522 g has a volume of  $4.50 \times 10^2$  mL at STP. Find the molecular formula if the empirical formula is  $\text{CH}$ .