

# Naming Amines

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Amines are near relatives of ammonia,  $\text{NH}_3$  where hydrogen atoms in the ammonia have been replaced by a hydrocarbon group.

Amines can be named in two ways.

First, they can be viewed as having an amino group, an  $-\text{NH}_2$  group, attached to an alkane. This approach is used for the IUPAC names.

Second, they can be seen as having an alkyl group attached to the nitrogen in the amine. This approach is used in creating common names.

## IUPAC method

### Rule 1:

The longest continuous chain containing the amino group is considered to be the parent compound

### Rule 2:

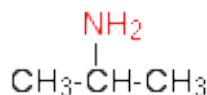
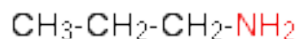
The prefix "amino" is added to the parent compound

### Rule 3:

A number is included before the "amino" to indicate the position of the  $\text{NH}_2$  group. No number is included for molecules with only 1 or 2 carbon atoms.

aminomethane

1-aminopropane



2-aminopropane

## Common name method

### Rule 1:

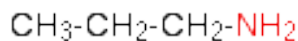
Count the carbon atoms on the alkyl chain

### Rule 2:

Add the alkyl prefix to 'amine'

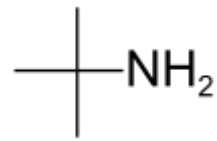
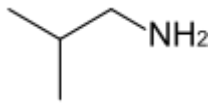
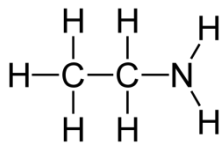
methylamine

propylamine



**Activity:**

Name the amines below:



Draw the following amines

3-aminohexane

2-methyl, 3aminopentane

2,3-dimethyl, 3-aminopentane

2,4 diaminobutane