

CHAPTER 14	Naming and Drawing Carboxylic Acids	BLM 14.3.2
OVERHEAD		

Remember that

- The carboxylic acid group must always be on the end of a chain.
- The carbon atom of the carboxyl group must be given the number one.

• Identify the root:

Locate the longest chain that includes the carboxyl group. Name the parent alkane.

• Identify the suffix:

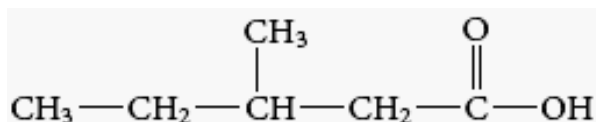
Drop the *-e* at the end of the name of the parent alkane and replace it with *-oic acid*.

• Identify the prefix:

Name and number any alkyl side groups on the main chain. The carbon atom of the carboxyl group is always number one.

Sample Problem

Name the following carboxylic acid:



Identify the root: The longest chain that includes the carboxyl group has five carbon atoms including the carbon atom in the carboxyl group. The parent alkane is pentane.

Identify the suffix: Replace the *-e* at the end of pentane with *-oic acid*. The name includes pentanoic acid.

Identify the prefix: There is a methyl group on carbon atom number three, so the prefix is 3-methyl.

Solution: The name of the compound is 3-methylpentanoic acid.