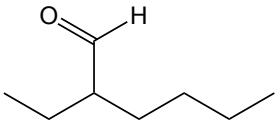
CONCEPT: NAMING ALDEHYDES

- **Recall:** Aldehydes possess a carbonyl carbon connected to a ____ atom.
- Set of rules for naming aldehydes are similar to ketones.
  - □ **Exception:** The carbonyl carbon of the aldehyde is always numbered ____.
  - □ Modify the ending from -____ to -____.

location-substituent-parent-modifier

EXAMPLE: Provide the systematic name for the following aldehyde.



STEP 1: Find the longest carbon chain (parent chain) and assign name according to the prefixes and modifier.

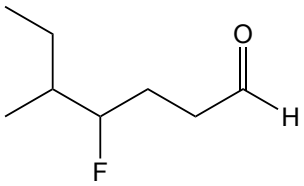
- □ Parent chain should include the aldehyde group and have _____ number of carbons.
- □ If a tie between longest chains, choose chain with more substituents.

STEP 2: Assign name to all the substituents.

STEP 3: Start numbering the chain at the carbon of the aldehyde group.

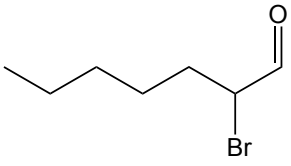
STEP 4 to 6: Repeat steps from previous naming topics.

PRACTICE: Provide the systematic name for the following aldehyde.

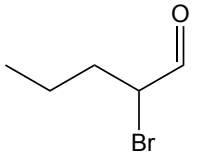


PRACTICE: Which of the following compounds represent 2-bromo-pentanal?

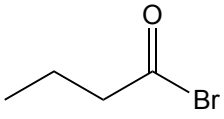
a)



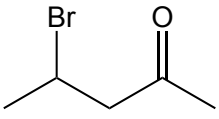
b)



c)



d)



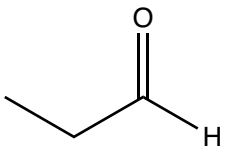
CONCEPT: NAMING ALDEHYDES

Common Naming: Simple

- Simple aldehydes are named using common names: use _____ with -_____ suffix.
  - □ These prefixes are utilized in common names by many carbonyl compounds.

Common Name Prefixes	
# of Cs	**Prefix**
1	_____
2	_____
3	Propion-
4	Butyr-
5	Valer-

EXAMPLE: Name the following aldehyde using common naming system.

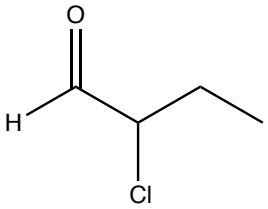


Common Naming: Substituted

- Substituents are designated with a numerical location.

location-substituent-prefix-aldehyde

EXAMPLE: Name the following aldehyde using common naming system.



STEP 1: Find the longest carbon chain (up to 5 C) and assign name according to common name prefix and suffix.

- □ Carbon chain should include the aldehyde group and have _____ number of carbons.
- □ If a tie between longest chains, choose chain with more substituents.

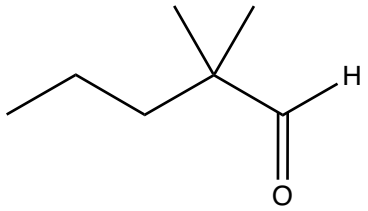
STEP 2: Assign name to all the substituents.

STEP 3: Start numbering the chain at the carbon of the aldehyde group.

STEP 4 to 6: Repeat steps from previous naming topics.

CONCEPT: NAMING ALDEHYDES

PRACTICE: Provide common name for following aldehyde.



PRACTICE: Provide common name for given molecule.