VIII.D KETONES [RC(=0)R¹]

Ketones are treated in the same way as the carboxylic acids and aldehydes except that the **site of the ketone group MUST be included in the name.** The family ending is 'one' and the prefix is 'oxo'. Ketones are lower priority than carboxylic acids, and their derivatives, and aldehydes.

Examples

1. Give the IUPAC name for

OBSERVATIONS

Redraw the structure:
$$\begin{array}{c} O \\ \\ OH \end{array} \longrightarrow \begin{array}{c} HO \\ C-C-C-C-C-C-C \\ 6 & 5 & 4 & 3 & 2 & 1 \end{array}$$

Fill out the

template

| | OBSERVATION | IMPLICATION |
|-----------------------------|---------------|--------------------------|
| Parent Group and Site | Ketone at C-3 | 3 -one E 9/1/1999 |
| Longest Carbon Chain/Ring | 6 Carbons | hex |
| # C=C or C≡C bonds and Site | None | 3-hexan |
| Final Word | | 3-hexanone |
| Substituents and Sites | OH at C-4 | 4-hydroxy- |
| Alphabetizing substituents | | 4-hydroxy- |

SOLUTION Compound is: 4-hydroxy-3-hexanone