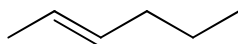


Marks
5

- Consider the compound **J** below.

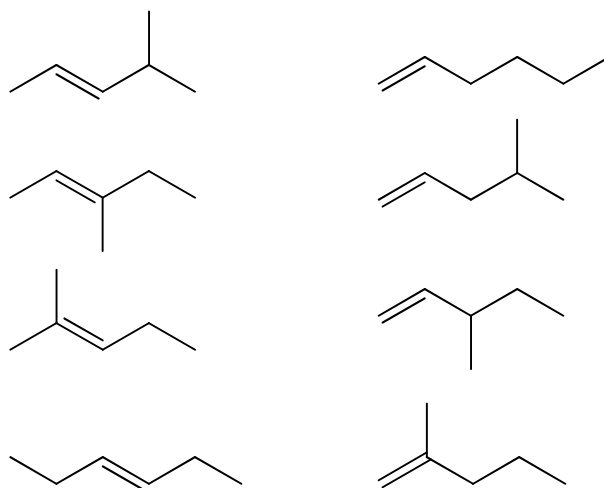
**J**

What is the systematic name for compound **J**.

(E)-hex-2-ene

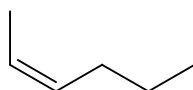
Draw a constitutional isomer of **J**.

Constitutional isomers have different atomic connectivities. Possible constitutional isomers include those below:



Draw a configurational isomer of **J**.

Configurational isomers have the same atomic connectivity but different spatial arrangements of the atoms. Because of the restricted rotation about a C=C double bond, the following compound is a configurational isomer of **J:**



Draw the structure of the product formed when compound **J** is reacted with hydrogen gas (H_2) and a palladium on carbon (Pd/C) catalyst.

Treatment with H_2 a Pd/C catalyst will lead to addition of H-H across the C=C bond:

