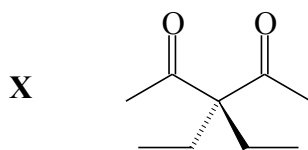
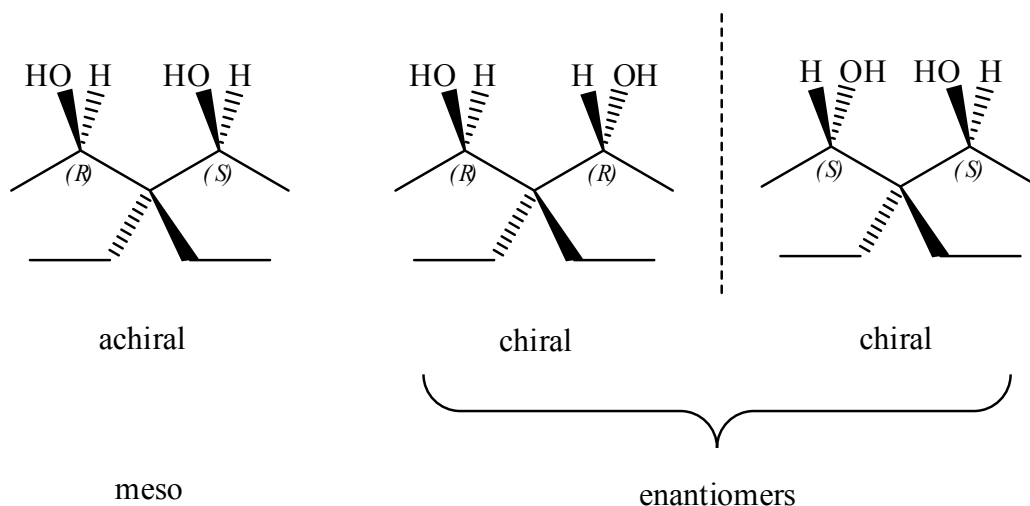


Marks
6

- Compound **X** can be reduced by treatment with sodium borohydride followed by dilute hydrochloric acid to form a mixture of diol compounds.



Clearly draw all possible product stereoisomers that can form from this reduction, taking care to represent clearly the stereochemistry of the products.



Clearly label each isomer drawn above as either chiral or achiral (not chiral).

Circle one of the product isomers you have drawn above and provide a full systematic name for this compound below. Make sure you include all relevant stereochemical descriptors.

(2*R*,4*R*)-3,3-
diethylpentane-2,4-diol

(2*R*,4*S*)-3,3-
diethylpentane-2,4-diol

(2*S*,4*S*)-3,3-
diethylpentane-2,4-diol