Draw all the stereo-isomers of the following compounds and assign (R) or (S) configuration:

2,4-dibromopentane

Solution:

Br_*__*_Br

The molecule of **2,4-dibromopentane** (see below) has two chiral centers (marked with asterisk), so it could have 3 possible stereoisomers.

First stereoisomer:

(2S,4S)-2,4-dibromopentane

Second stereoisomer: _{..} \Br Br

(2R,4R)-2,4-dibromopentane

Third stereoisomer (also called meso-2,4-dibromopentane):

Br/,,,, ∽___Br ⊿Br Br or

(2R,4S)-2,4-dibromopentane

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