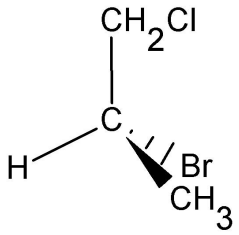
Stereochemistry Exercises

Name: _____ Date: _____

For these exercises you may use molecular models and/or the 3-D images provided.
After completing the question please indicate what method you used to solve it using the provided answers.

1. Indicate whether the following molecule is "R" or "S":



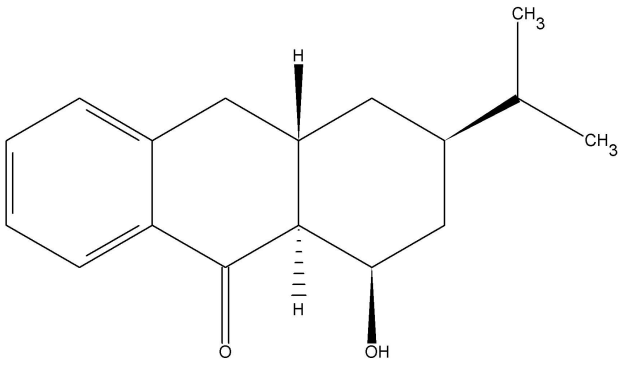
3-D Image

- R
- S

For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither

2. How many chiral centers does the following molecule have?



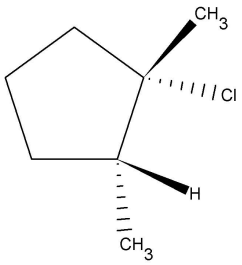
3-D Image

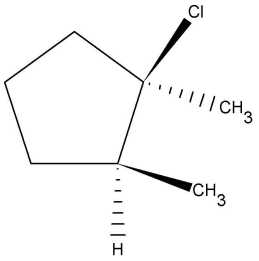
- 1
- 2
- 3
- 4
- 5
- 6

For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither

3. How are the following molecules related?





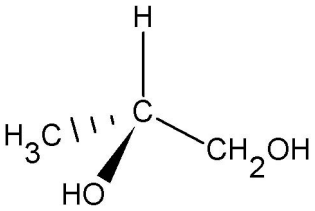
3-D Image

- identical
- enantiomers
- diastereomers

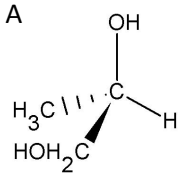
For the previous question did you use:

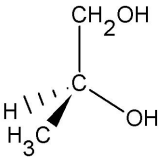
- Molecular model kit
- 3-D computer drawings
- Both
- Neither

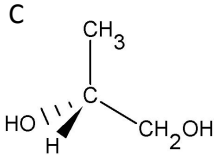
4. Choose the enantiomer of the compound below:

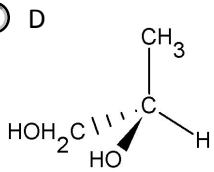


3-D Image

- A 

- B 

- C 

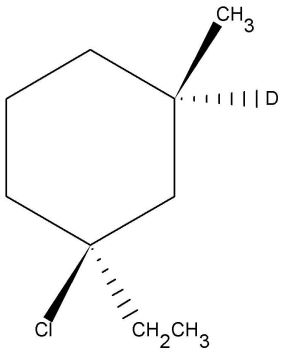
- D 

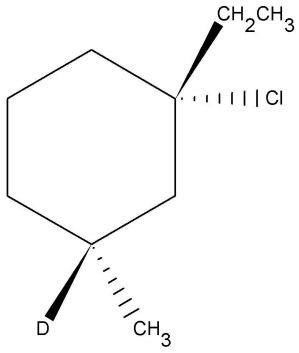
For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither

5. How are the following compounds related?

3-D Image





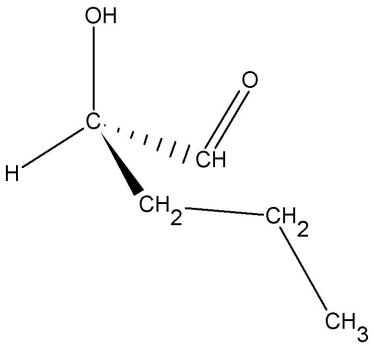
- identical
- enantiomers
- diastereomers

For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither

6. Indicate whether the following molecule is "R" or "S":

3-D Image

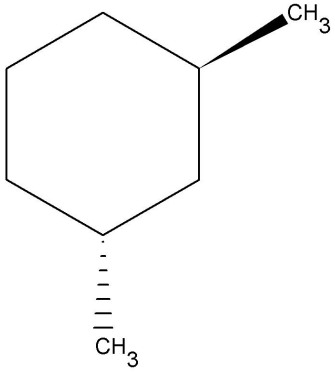


- R
- S

For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither

7. Is the following compound meso?



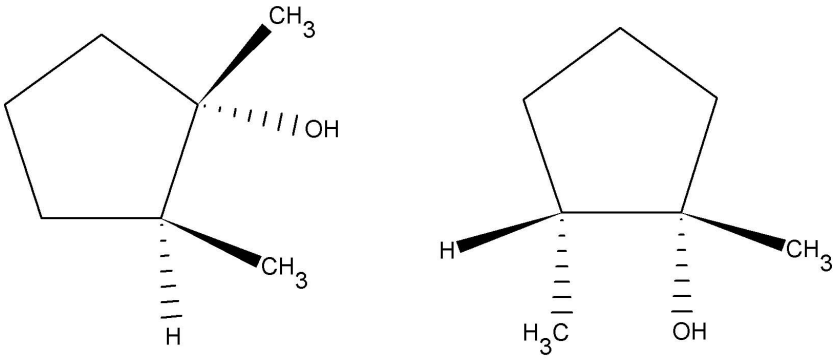
3-D Image

- Yes
- No

For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither

8. How are the following molecules related?



3-D Image

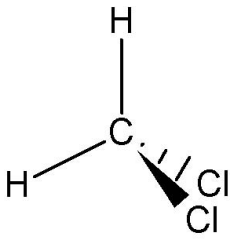
- identical
- enantiomers
- diastereomers

For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither

9. Does the following molecule have a plane of symmetry?

3-D Image



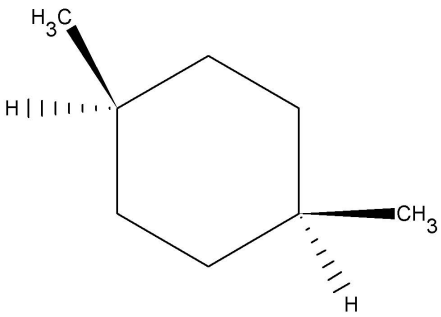
- Yes
- No

For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither

10. Is the following molecule chiral?

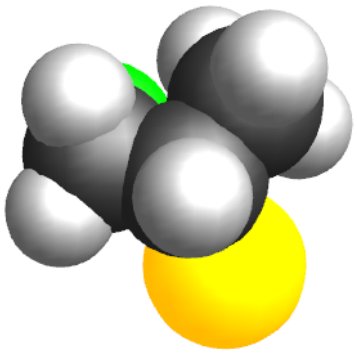
3-D Image



- Yes
- No

For the previous question did you use:

- Molecular model kit
- 3-D computer drawings
- Both
- Neither



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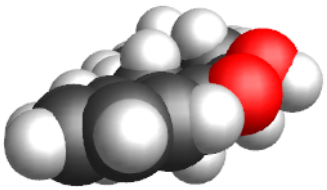

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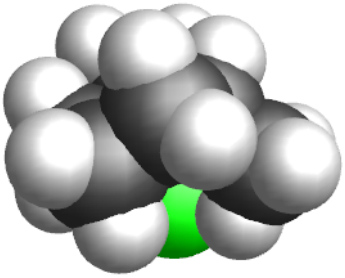

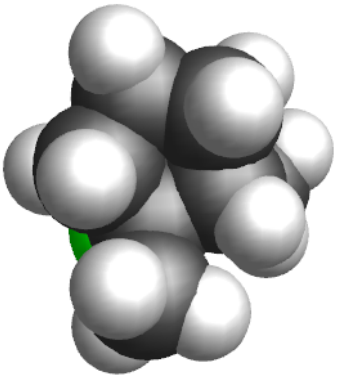

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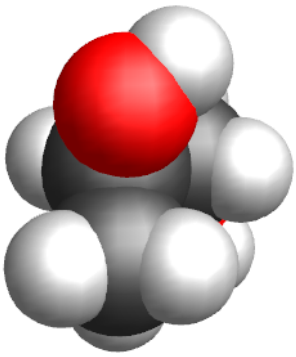
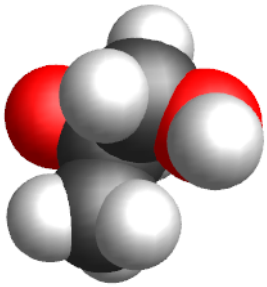
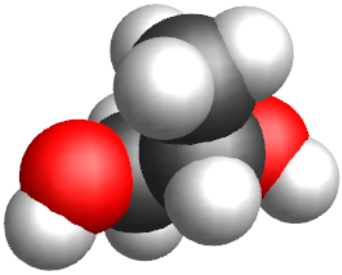




A



B

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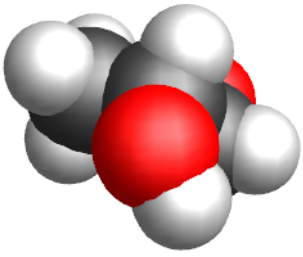
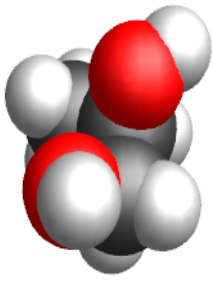
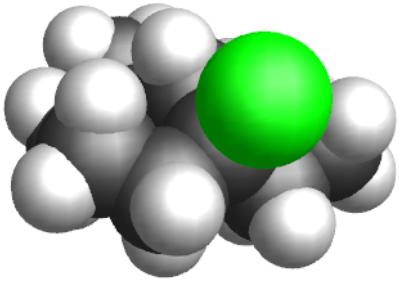
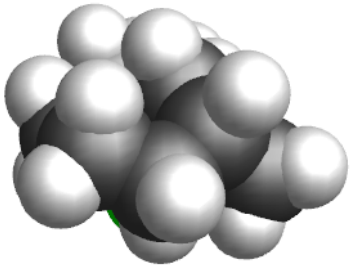


C



D





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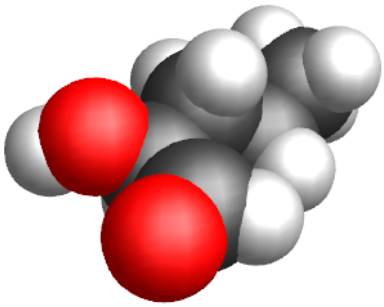

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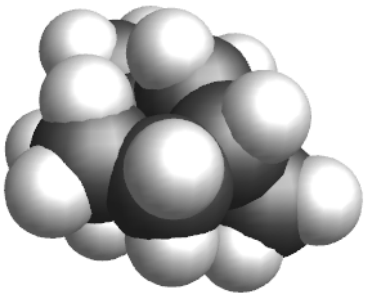

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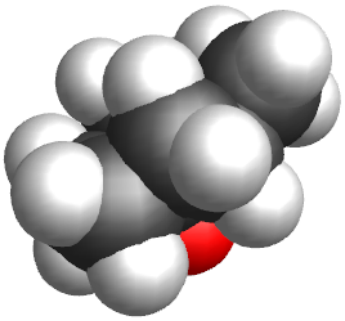

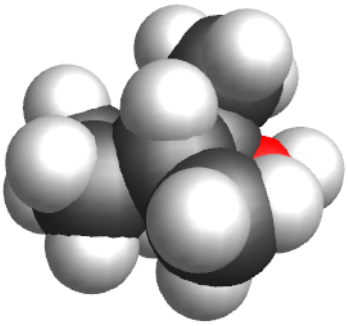

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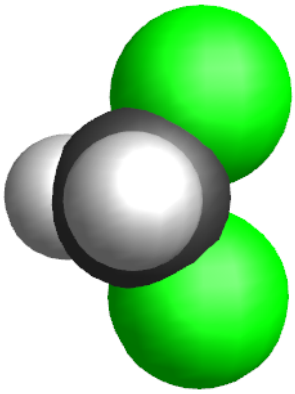

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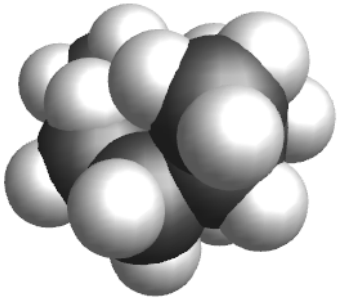

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