— CONFORMATIONAL ANALYSIS —

Questions taken from "Organic Chemistry as a Second Language" – David R Klein

① Draw the Newman projections for each of the following structures when viewed as indicated by the arrow

e.g. 

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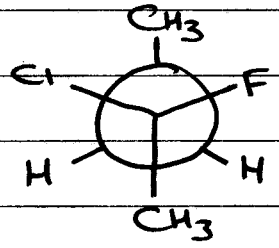
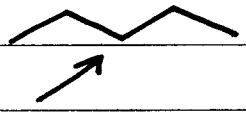


a) 
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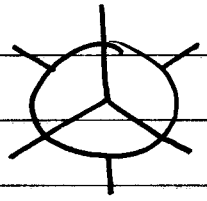
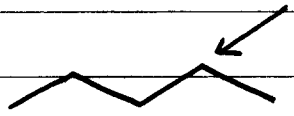


b) 
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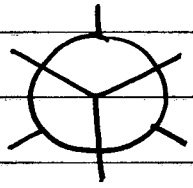
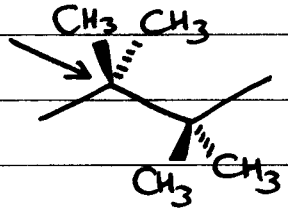


c) 

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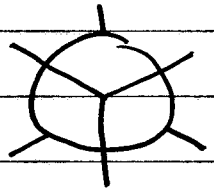
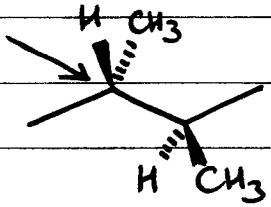


d) 

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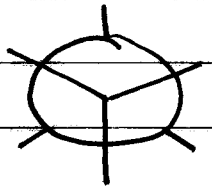
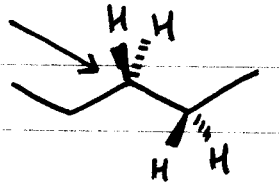


e) 

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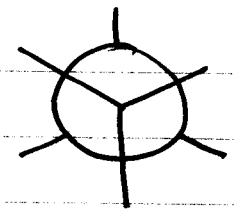
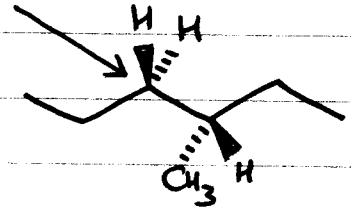


f) 

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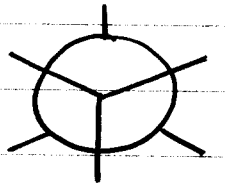
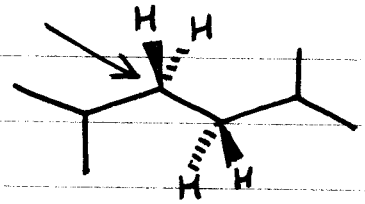


g) 

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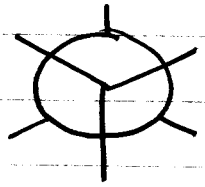
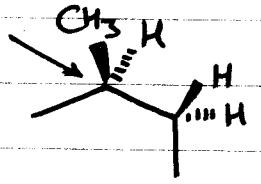


h) 

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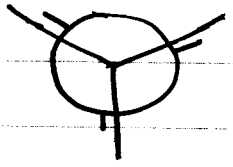
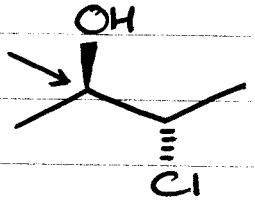


i) 

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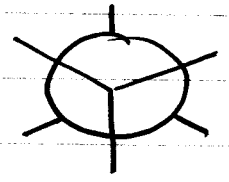
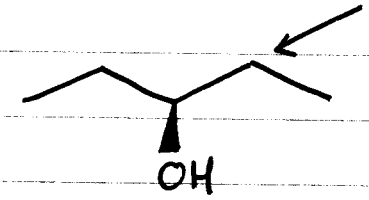


j) 

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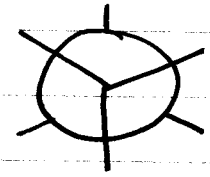
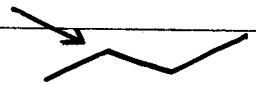
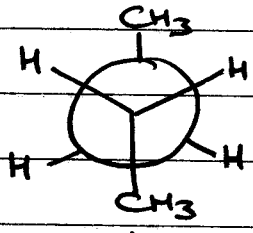


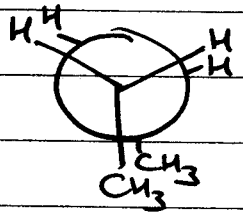
(2) Draw the most and least stable conformations for each of the following compounds when viewed as indicated by the arrow.

e.g.



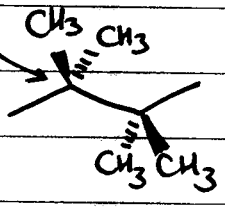


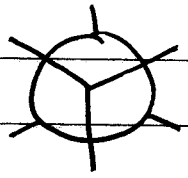
most stable



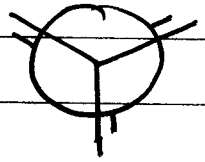
least stable

a)





most stable



least stable

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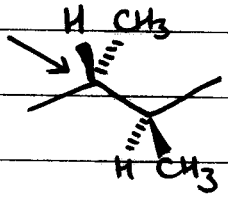
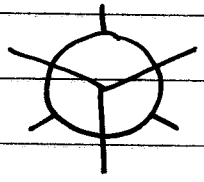
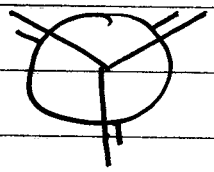


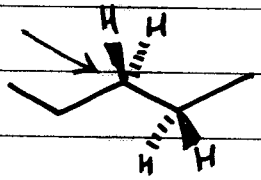


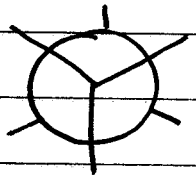
most stable



least stable

c)





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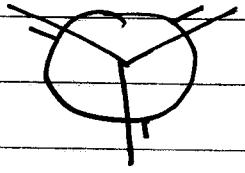
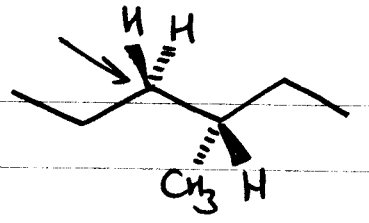
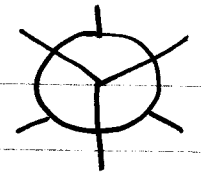
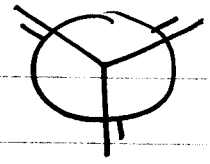
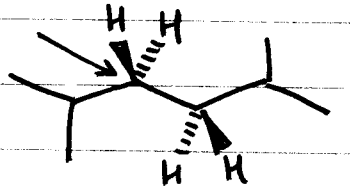


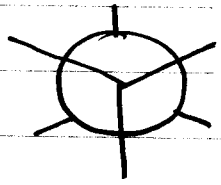
least stable

d) 


most stable


least stable

e) 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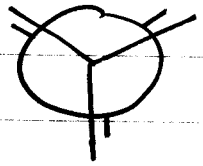
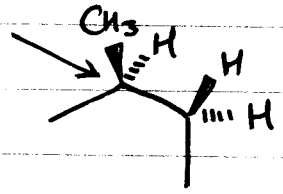
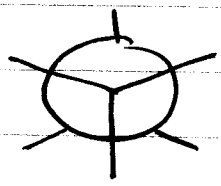

least stable

f) 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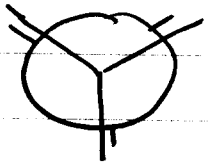
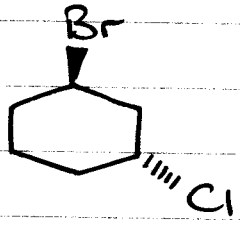

least stable

(3) Draw a chair conformation for each of the compounds below

e.g. 

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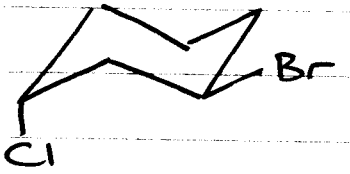
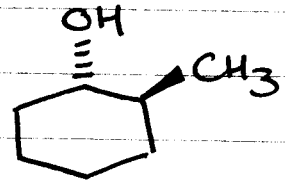


a) 

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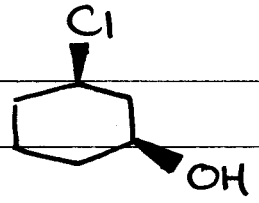
b) 

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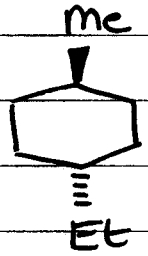
c) 

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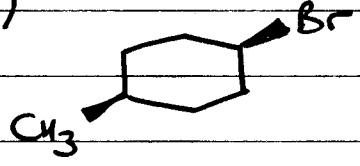
d) 

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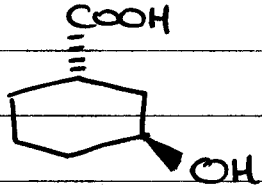
e) 

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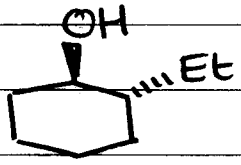
f) 

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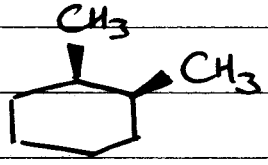
g) 

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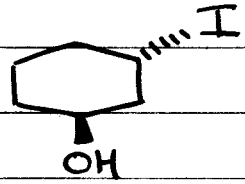
h) 

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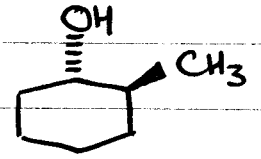
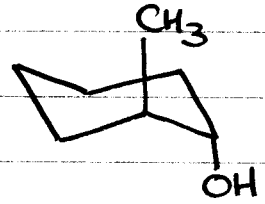
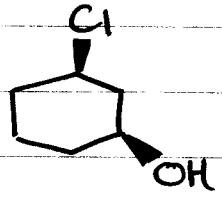
④ For each of the compounds below, draw both chair conformations

e.g.





a)



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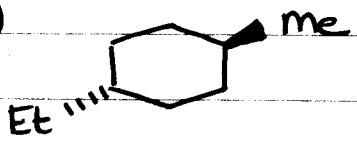

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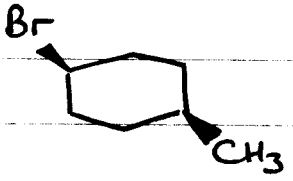

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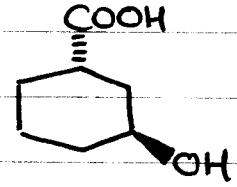
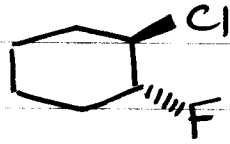
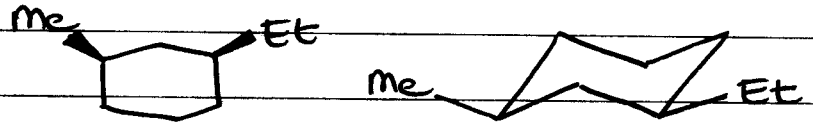
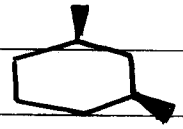


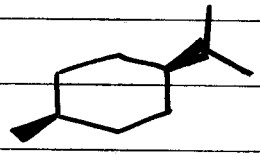
e)

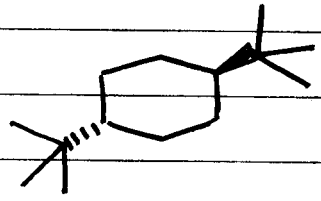


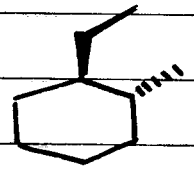
(5) For each compound below, draw the most stable chair conformation

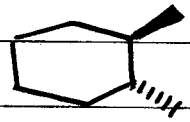
e.g. 

a) 

b) 

c) 

d) 

e) 

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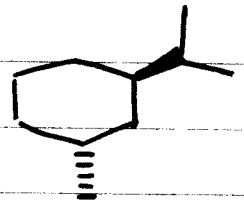

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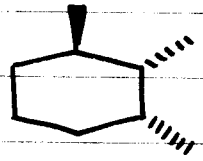

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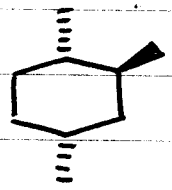
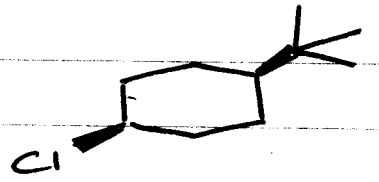


i)



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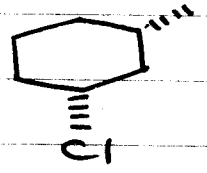

k)