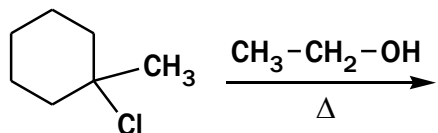
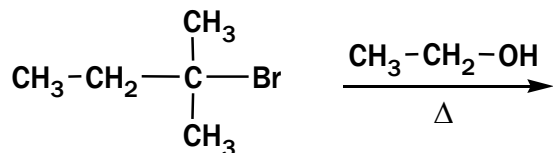


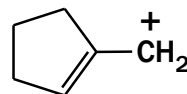
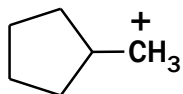
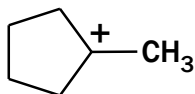
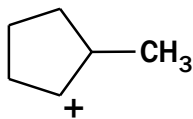
Unimolecular Mechanisms- S_N1 Reactions

Work through each problem before looking at the answer key below.

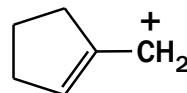
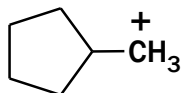
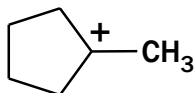
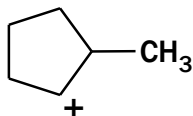
Draw the solvolysis product for each reaction (S_N1 product).



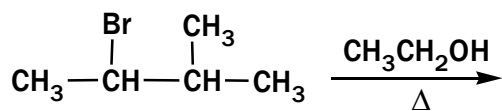
Arrange these carbocations from most stable to least stable.



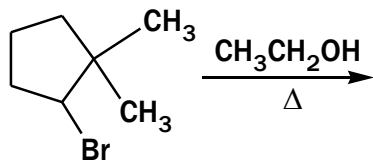
Push arrows to show which carbocations can rearrange to a more stable ion.



There are two solvolysis products for these reactions (S_N1 products), draw both products for each.



hint- consider carbocation rearrangement via 1,2 hydride shift

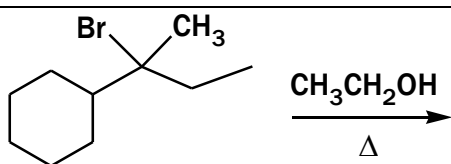
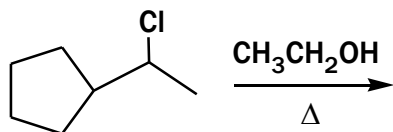
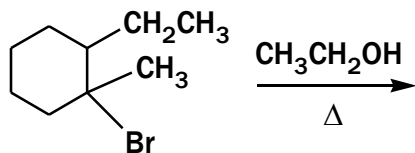


hint- consider carbocation rearrangement via 1,2 methanide shift

Unimolecular Mechanisms- E1 Reactions

Draw all possible E1 elimination products for each reaction and indicate which alkene is preferred.

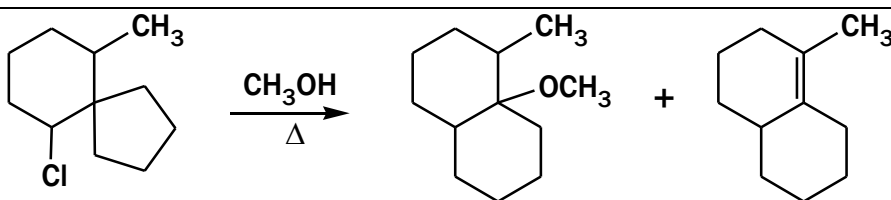
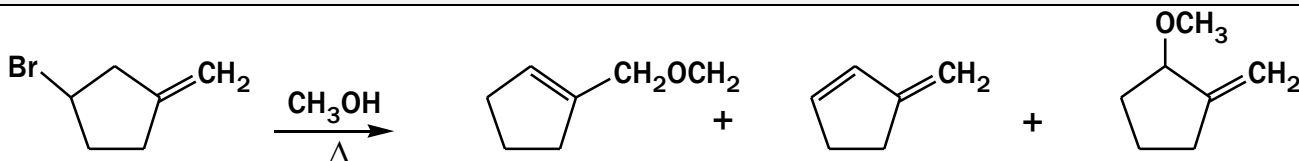
hint- identify β -hydrogens in each substrate



Solvolysis gives 5 products. Consider both carbocations and draw all 5 products.

	products from 2° carbocation	products from 3° carbocation
<p> <chem>CC1(Br)CCCCC1</chem> $\xrightarrow[\Delta]{\text{CH}_3\text{OH}}$ </p>		

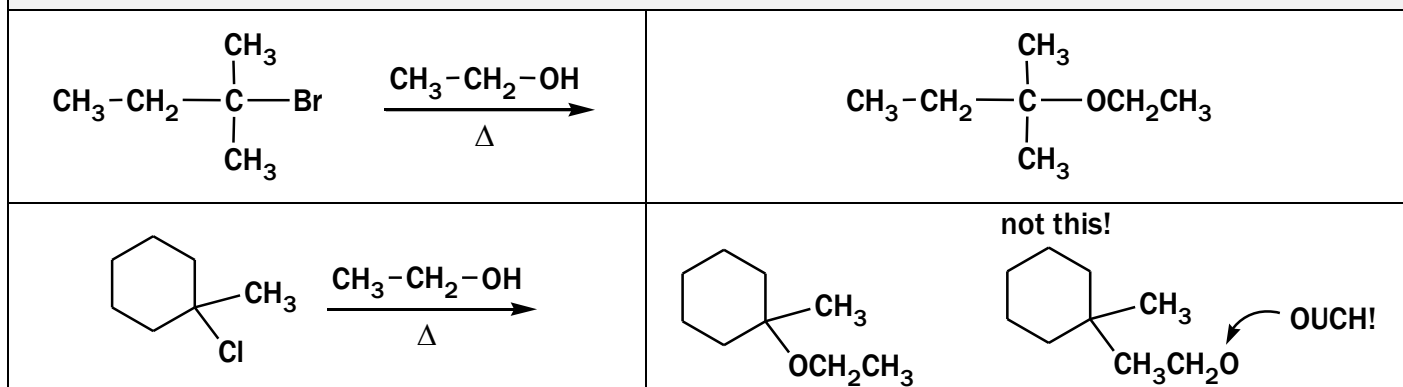
Draw mechanisms to account for these products.



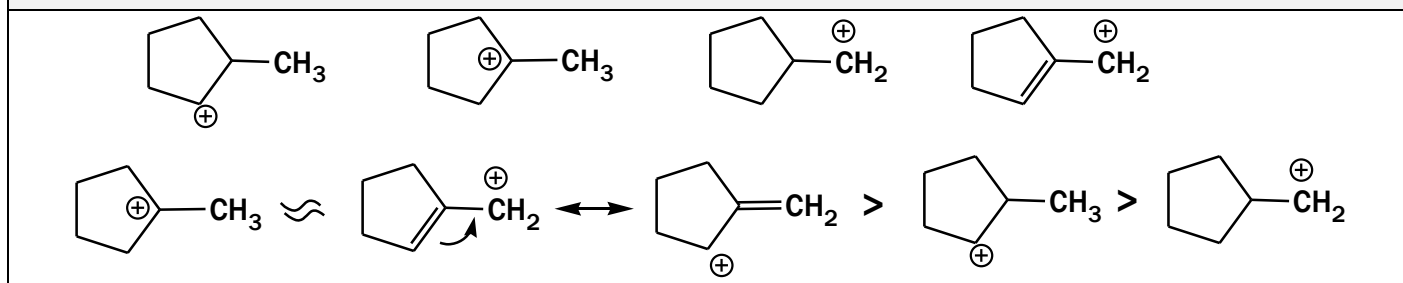
ANSWER KEY

S_N1 Reactions

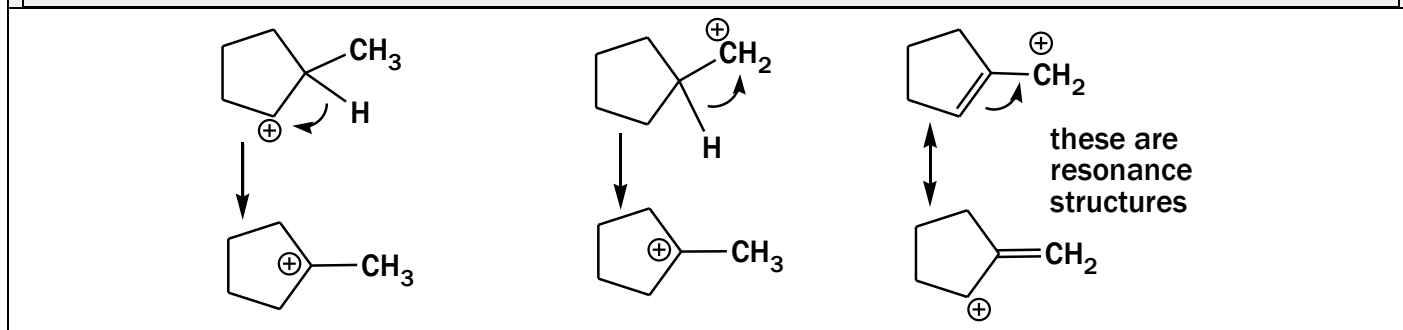
Draw the solvolysis product for each reaction (S_N1 product).



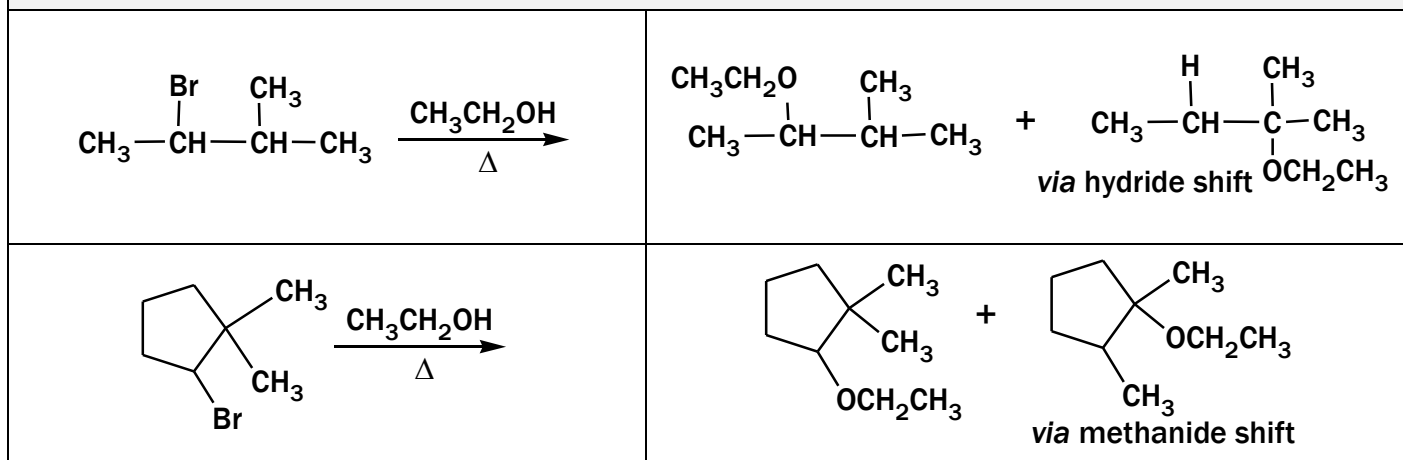
Arrange these carbocations from most stable to least stable.



Push arrows to show which carbocations can rearrange to a more stable ion.

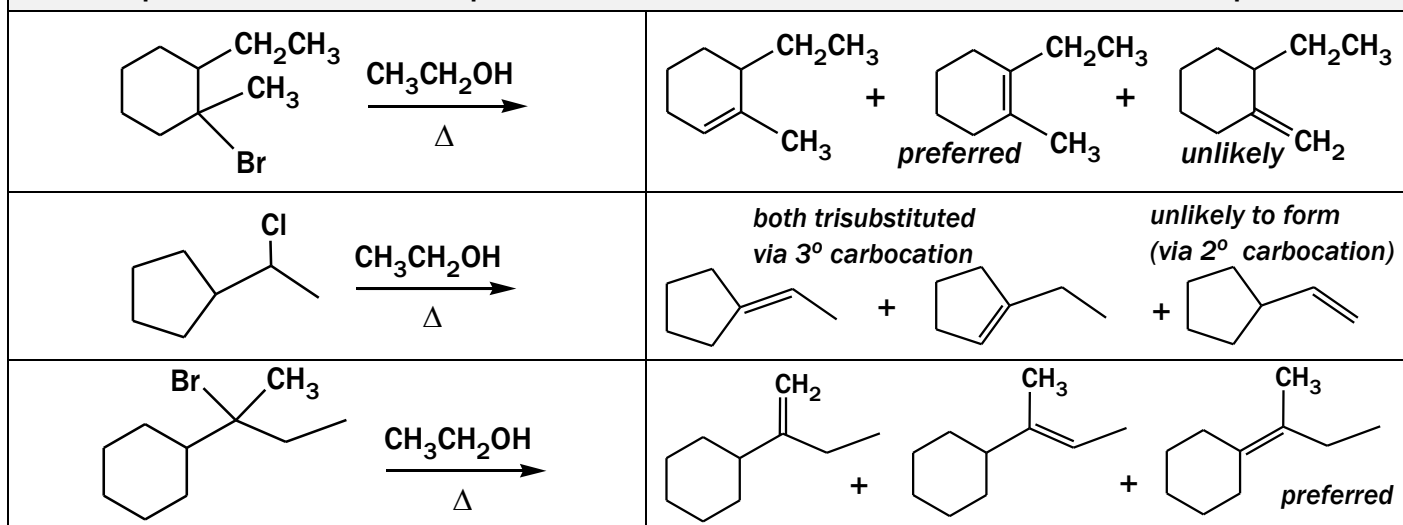


There are two solvolysis products for these reactions (S_N1 products), draw both products for each.

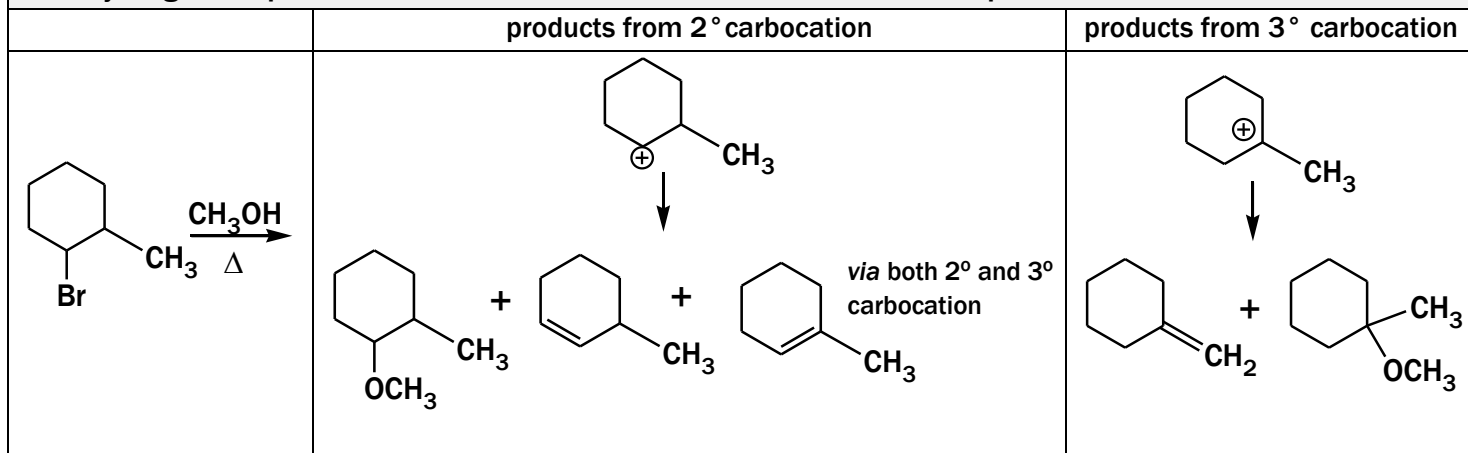


E1 Reactions

Draw all possible E1 elimination products for each reaction and indicate which alkene is preferred.



Solvolysis gives 5 products. Consider both carbocations and draw all 5 products.



Draw mechanisms to account for these products.

