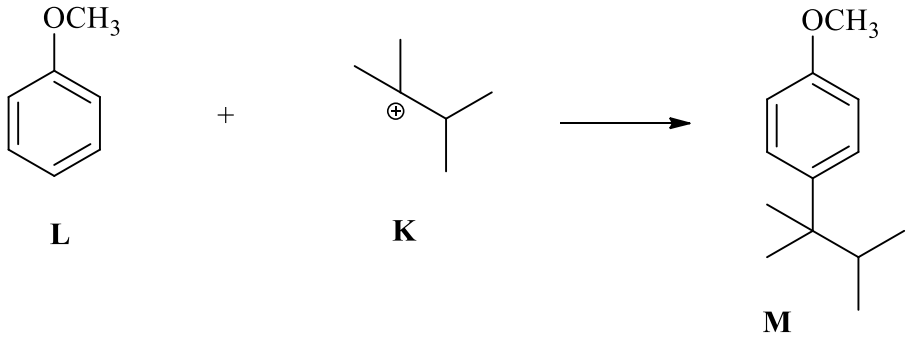
Reaction of **K** with anisole (methoxybenzene, **L**) gives **M** as the major product. Propose a mechanism for this transformation.

Marks 4

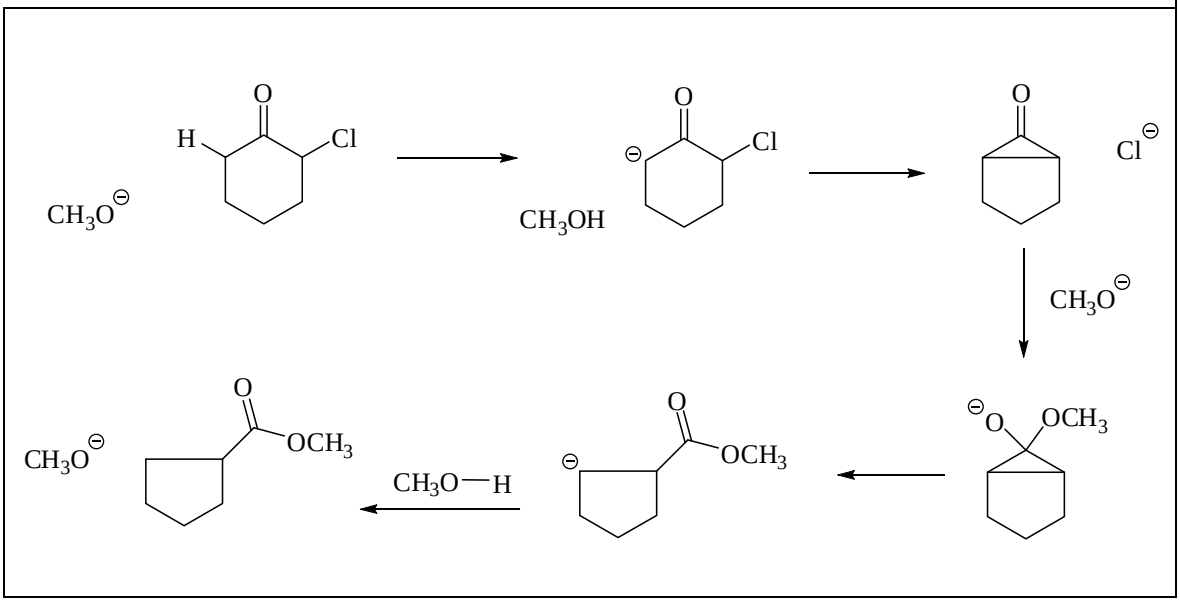


L **K** **M**

Briefly explain why the 4-substituted product **M** is formed preferentially.

Marks 5

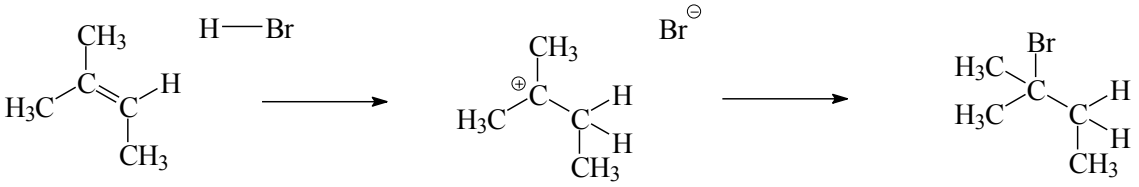
- Apply your understanding of 'curly arrows' to draw in the arrows required to complete a mechanism for the following reaction.



Page Total:

- The incomplete proposed mechanism for the reaction of 2-methyl-2-butene with HBr is shown below. Complete the mechanism by adding curly arrows to illustrate the bonding changes that take place.

2



Which one of the two reactants is the electrophile?