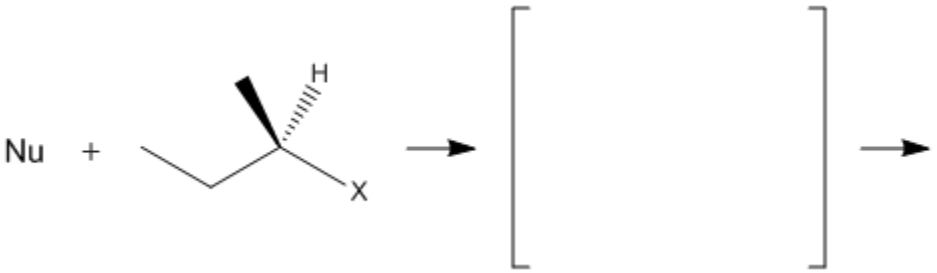
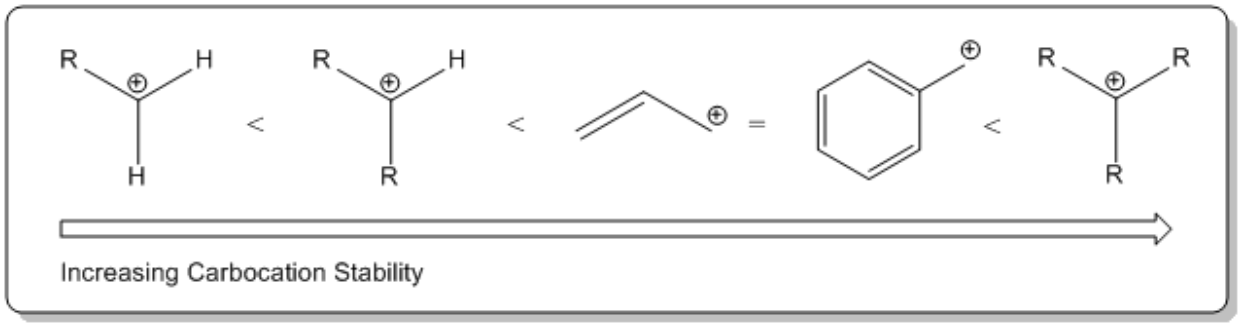
CONCEPT: S_N1 REACTION

□ A neutral nucleophile reacts with an *inaccessible* leaving group to produce substitution in two-steps.

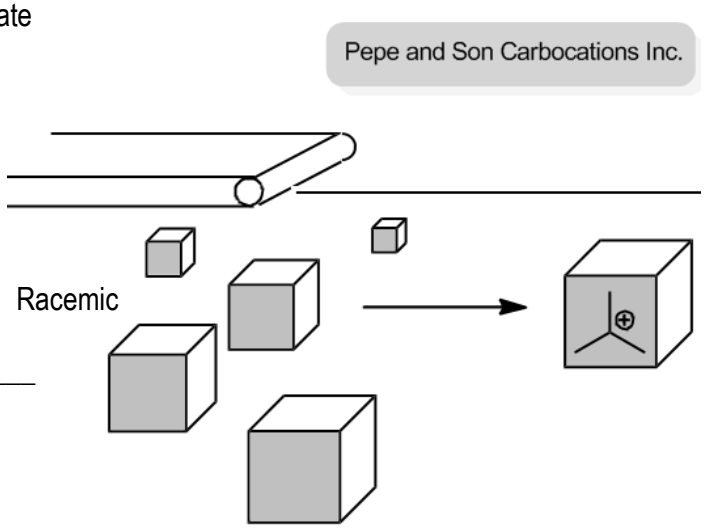


The more -R groups, the more substituted the carbocation, the more _____



S_N1 Properties (Circle One)

- Nucleophile = Strong / Weak
- Leaving Group = Unsubstituted / Highly Substituted
- Reaction coordinate = Transition State / Intermediate
- Reaction = Concerted / Two-Step
- Rate = Unimolecular / Bimolecular
- Rate = k[RX] / k[Nu][RX]
- Stereochemistry = Inversion / Retention / Racemic
- Nickname = _____



PRACTICE: Provide the mechanism and final products for the following reactions.

□ NOTE: Substitution reactions with ***neutral nucleophiles*** require an additional deprotonation step.

a.

b.