

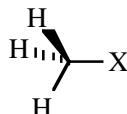
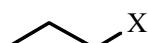
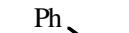
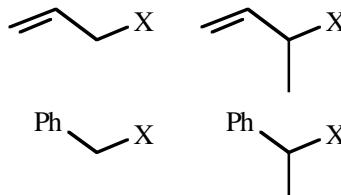
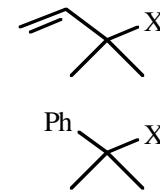
Reactant



Base



MeX

 1° RX 2° RX
or 3° RX
or**Weak**

examples:

 $\text{CN}^- > \text{N}_3^- > \text{NH}_3 > \text{H}_2\text{O}$ **premed411.com**

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Strong

examples:

 OH^- , $\text{C}_2\text{H}_5\text{O}^-$,
 $\text{HC}\equiv\text{C}^-$, NH_2^-

Sn2

Sn2

Sn2

Sn1 & E1

Sn1 & E1

Sn1 & E1 are favored when protic solvents and Np's are used.

The rate of Sn2 is greater with:
 1) polar aprotic solvents
 2) stronger Np's
 3) higher Np concentration
 4) less hindered substrates

NOTE: For ALL reactions where Subst & Elim compete, higher temperatures increase the ratio of Elim/Subst.

Strong Hindered

examples:

 $(\text{CH}_3)_3\text{CO}^-$
 $[(\text{CH}_3)_2\text{CH}]_2\text{N}^-$

Sn2

E2

Hofmann

E2

Zaitsev

E2

Zaitsev

E2

Hofmann

E2

Hofmann

Strong Bases $\text{R}^- > \text{H}^- \approx \text{NH}_2^- >> \text{HC}\equiv\text{C}^- >> \text{RO}^- > \text{OH}^-$

If it ain't on this list, it ain't strong.

Zaitsev Elim

If possible, more substituted alkene forms.

Hofmann Elim

If possible, less substituted alkene forms.