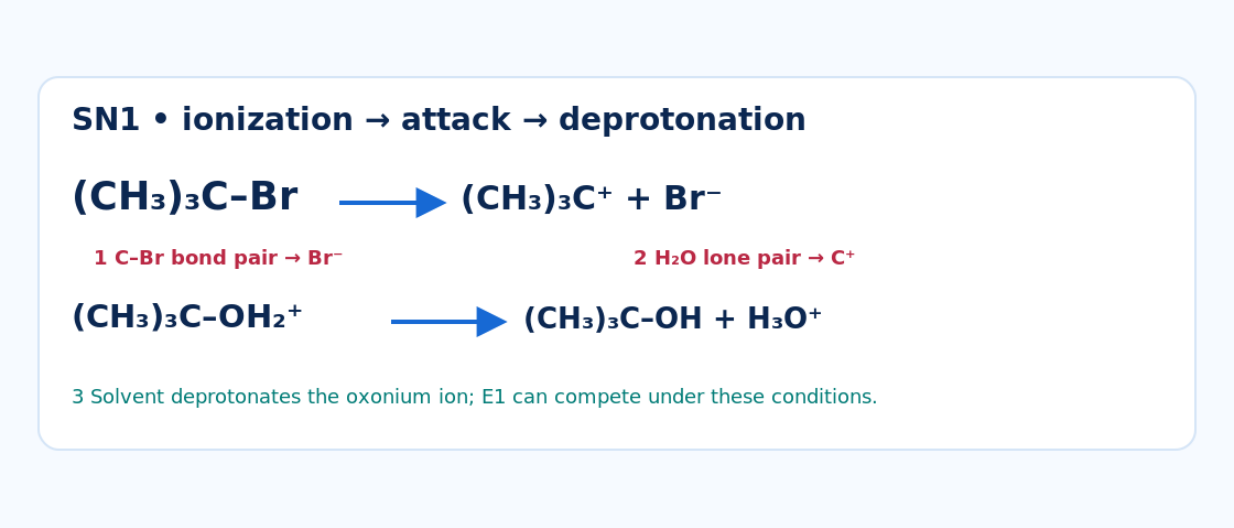
SN1 Mechanism Practice

STUDENT WORKSHEET · Mechanism reasoning and curved-arrow practice

Name: _____ Date: _____

Learning target: Identify plausible carbocations, use the right electron-flow sequence, and recognize stereochemical mixtures and E1 competition.



Reference illustration: schematic electron-flow map. The exercises below require your own structures and arrows.

1. 2-Bromo-2-methylpropane with Water, mild temperature: identify the likely pathway, draw the elementary arrow(s), predict relevant product(s), and name one competing outcome or limitation.

2. 2-Chloro-2-methylpropane with Methanol, lower temperature: identify the likely pathway, draw the elementary arrow(s), predict relevant product(s), and name one competing outcome or limitation.

3. 2-Bromo-2-methylbutane with Water, mild temperature: identify the likely pathway, draw the elementary arrow(s), predict relevant product(s), and name one competing outcome or limitation.

4. 1-Bromo-1-methylcyclohexane with Aqueous ethanol, low temperature: identify the likely pathway, draw the elementary arrow(s), predict relevant product(s), and name one competing outcome or limitation.

5. Draw the sequence for tert-butyl bromide in water, including charge and proton transfers.

6. Why can SN1 produce competing E1 product and mixed stereochemistry?

Practice note: Mechanism selection is evidence-based. Solvent, substrate, temperature, and competing reactions influence outcomes.