Chapter 11 Substitution vs. Elimination Reactions

For each reaction

- 1) Determine what mechanism $(S_N 1, S_N 2, E1, or E2)$ will predominate and
- 2) Give the products you would expect to be formed.

#1

#2

 $\begin{array}{rcl} CH_{3}CH_{2}CH_{2}Br + CH_{3}ONa & \underbrace{50 \ ^{\circ}C}{CH_{3}OH} \\ primary & strong base \\ alkyl halide & strong Nuc. \end{array}$ $CH_{3}CH_{2}CH_{2}Br + (CH_{3})_{3}COK & \underbrace{50 \ ^{\circ}C}{(CH_{3})_{3}COH} \\ primary & strong, \\ alkyl halide & strong, \\ hindered base \end{array}$

#3

$$CH_3CH_2 \xrightarrow{H} H^{HBr} + NaSH \xrightarrow{50 °C} CH_3OH$$

secondary	strong nuc
alkyl halide	weak base
w/ stereocenter	

#4

	+	NaOH	50 °C
(CH ₃ CH ₂) ₃ CBr			CH ₃ OH
tertiary alkyl halide		strong base strong nuc	

#5

$$(CH_{3}CH_{2})_{3}CBr \qquad \begin{array}{c} 25 \ ^{o}C \\ \hline \\ CH_{3}OH \end{array}$$
tertiary
alkyl halide
solvent is
weak base
weak nuc

Here's some for you to try on you own. Answers will be posted on my webpage.



Provide the missing starting material(s).

