Quiz 4: Alkyl Halides, Substitutions on Saturated Carbons

1. Identify the product(s) in each of the following reactions:

(a)
$$\xrightarrow{Br}$$
 \xrightarrow{EtOH} ? (b) OTs \xrightarrow{NaBr} ?

$$(c) \xrightarrow{OH} \xrightarrow{HCI} ?$$

$$(d) \xrightarrow{NaCN} ?$$

2. When (1*R*,2*R*)-2-bromocyclohexanol is treated with a strong base, an epoxide (cyclic ether) is formed. Suggest a mechanism for formation of the epoxide: