Amines

1. What is the hybridization of the following nitrogen atoms



b. ONI

c. N

d.



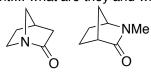
e.

NH₂

f.

g.

h. The nitrogen in the following two are different.... what are they and why?



2. Predict the major product(s) of the following reactions and show a mechanism.

a.

b.

C.

$$N_3$$
 LiAlH₄

d.

e.

f.

3. Propose a series of reactions that can be used to carry out the following synthesis.

a.