

Molecule drawing quiz

1) Sketch a model of the following molecules using hybridized and/or unhybridized orbitals. Label each orbital and bond type. Indicate all bond angles and if each bond can freely rotate.

a) N_2

b) NH_3

c) CO_2

d) $\text{NH}_2(\text{CO})\text{NH}_2$ (urea)

e) methanol

f) ethanal

2) Label the hybridization of the indicated atoms on the molecule shown here - thiamine pyrophosphate. (notice: many implicit hydrogens and lone pairs are omitted)

