

Solutions

Each answer shows the steps, then the **result**.

2.1

- 4

2.2

- Tetrahedral, 109.5°

2.3

- sp

3.1 B

- 3 domains with no lone pairs is trigonal planar

3.2

(a)

- 4 (2 bonds + 2 lone pairs)

(b)

- Bent, $\approx 104.5^\circ$

(c)

- sp^3

3.3

- NH_3 has one lone pair, which repels more strongly than a bonding pair and pushes the N–H bonds closer together, reducing the angle below the tetrahedral 109.5°