

Problems

1. Why are the bond angles of H_2O and NH_3

- $\text{H}_2\text{O} < 180^\circ$
- $\text{H}_2\text{O} > 180^\circ$
- $\text{NH}_3 < 180^\circ$
- $\text{NH}_3 > 180^\circ$

2. What is the hybridization of H_2O and NH_3

- H_2O is sp^3
- H_2O is sp^2
- NH_3 is sp^3
- NH_3 is sp^2

3. What is the bond angle in H_2O ?

- 180°
- 104.5°
- 109.5°
- 90°

4. NH_3 is

- linear
- bent
- trigonal planar
- tetrahedral

5. What is the hybridization of NH_3 ?

- sp^3
- sp^2
- sp
- sp^3d

6. What is the bond angle in NH_3 ?

- 180°
- 109.5°
- 104.5°
- 90°

7. The H_2O molecule has two lone pairs of electrons

- on the oxygen atom
- on the hydrogen atoms
- on the oxygen atom
- on the hydrogen atoms

8. The NH_3 molecule has

- one lone pair of electrons
- two lone pairs of electrons
- three lone pairs of electrons
- four lone pairs of electrons

9. The H_2O molecule has

- one lone pair of electrons
- two lone pairs of electrons
- three lone pairs of electrons
- four lone pairs of electrons

10. The NH_3 molecule has

- one lone pair of electrons
- two lone pairs of electrons
- three lone pairs of electrons
- four lone pairs of electrons

11. The H_2O molecule has

- one lone pair of electrons
- two lone pairs of electrons
- three lone pairs of electrons
- four lone pairs of electrons

12. The NH_3 molecule has

- one lone pair of electrons
- two lone pairs of electrons
- three lone pairs of electrons
- four lone pairs of electrons

13. The H_2O molecule has

- one lone pair of electrons
- two lone pairs of electrons
- three lone pairs of electrons
- four lone pairs of electrons

14. The NH_3 molecule has

- one lone pair of electrons
- two lone pairs of electrons
- three lone pairs of electrons
- four lone pairs of electrons