

Predict the shape of the following molecules, and suggest bond angles:

1. BeCl_2
2. BF_3
3. CH_4
4. PCl_3
5. H_2S
6. SnCl_2

Predict the shapes of the following molecules, and suggest bond angles:

7. CO_2
8. SO_2
9. SO_3
10. SF_6
11. XeF_4
12. PCl_5

Predict the shapes of the following ions, and suggest bond angles:

13. PCl_4^+
14. PCl_6^-
15. SO_4^{2-}
16. NO_3^-
17. NO_2^-
18. NH_4^+
19. SO_3^{2-}
20. CH_3^+
21. CH_3^-