

1. Using Vesta and attached instructions, present pictures of coordination polyhedra for cations in BaTiO_3 , CaF_2 , MgO , SiO_2 (alpha-quartz) and CaCO_3 (calcite) . Compare the outputs, determine where coordination polyhedra share corners, where they share edges, and where they share faces.
2. Using Vesta create structures of CsCl ([9008789.cif](#)) and GaAs ([9008845.cif](#)). Determine all symmetry axes for both structures .