Problem #6 Cesium chloride (CsCl) consists of equal numbers of cesium and chlorine ions, placed at the points of a body-centered cubic lattice so that each ion has eight of the other kind as its nearest neighbor,

1) Calculate the differential cross section for coherent neutron scattering from CsCl.
2) Sketch the neutron powder diffraction pattern of CsCl and compare those to the X-ray powder diffraction pattern.
3) Calculate the differential cross section for incoherent neutron scattering from CsCl.

(10 points)