This contour map is of Mount Shasta in the Cascade Mountains of western USA.

1. Draw a cross section from X-Y. Choose a suitable vertical interval and try not to exaggerate the height too much: the horizontal distance is about 30km but the height difference is only about 3km.
2. Label the following features: main volcano cone, crater of Mount Shasta, Mount Shastina.
3. What is Mount Shastina? Explain your answer.
4. What type of volcano is Mount Shasta? Give reasons for your answer.
5. Calculate the approximate area covered within the 1,750m contour. Assume that it’s a circle centred on the Mt Shasta’s crater. (Area of circle = πr2)
6. Assume Mount Shasta is a perfect cone shape – what is the volume of the cone above the 1,750m contour? (Formula is 1/3 height x area of base (i.e. 1/3h πr2)). This will give you an idea of the amount of material produced by the volcano.

