Building Boxes

Using exactly 12 cubes for each, how many <u>different</u> rectangular prisms can you build?

Length	Width	Height	Volume	Surface Area (SA)

Intuitively, why can two of the dimensions **not** be 2x4?

Write a formula to express the volume (number of cubic units) of a rectangular prism.

Look at the area of a face that can be described as length X width. Call that a Base area, denoted by B. Write a new formula for the volume of a rectangular prism using B.

Using 12 cubes, build a structure/building that is not ordinary ("regular shape"). Draw a isometric drawing and orthographic drawing. Find the surface area (if you were to paint the building; you would not paint the bottom of the building) and volume of the building.