Problem of the Week
Problem C
Ice Box

A metal box in the form of a rectangular prism has an 18 cm by 22 cm base and a height of 77 cm. The box is to be filled with water, which will then be frozen. When water freezes it expands by approximately 10%. Determine the maximum depth to which the box can be filled with water so that when the water freezes, the ice does not go above the top of the container.