**Composite Volume of Prisms, Pyramids, Cylinders, Cones, and Spheres**

**How to Calculate**

1. Calculate the volume of each part of the composite object
2. Add the volumes
3. Subtract the volume of any parts that are removed from the object

Composite shapes are shapes that don’t have a ‘unique’ name, but they are made up of other shapes we are familiar with. An ice cream for example, is a cone with a hemisphere.

1) How much ice cream is here, assuming the cone is filled with ice cream?

2) How much air is inside this empty house, which is made up of a rectangular prism base and a triangular prism roof?

3) Pineapple can be bought in sliced rings that look like the sketch provided. If the outer ring has a radius of 7cm and the inner ring has a radius of 3cm, where the height is 1cm in both cases, find the **volume** of this pineapple slice.

4) The following shape is a frustum. It is a square-based pyramid with the tip cut off. Find the volume of the frustum.

[](http://images.google.ca/imgres?imgurl=http://midwestsports.typepad.com/.a/6a01157020e7c8970c0120a55c66ed970c-800wi&imgrefurl=http://www.midwestsportstennisblog-strings.com/2009/08/index.html&usg=__f3R2dNw0LKL6JmjclAhdEvbBMiI=&h=500&w=500&sz=19&hl=en&start=16&um=1&tbnid=GyKALbj_HKs-WM:&tbnh=130&tbnw=130&prev=/images?q=3+tennis+balls+can&hl=en&um=1)5) Three tennis balls are packaged tightly into a cylindrical container. The diameter of one tennis ball is 1.7in. Determine the volume of the space in the container that is not taken up by the tennis balls.

6) A shipping tube that ships 3-packs of soccer balls is made from a cylindrical center with a hemisphere at each end. Calculate the space that is inside the container. \*watch for the units

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| ANSWERS: 1) 218.1cm3, 2) 158.76m3, 3) 125.66 cm3, 4) 7.7 ft3, 5) 3.9in3, 6) 47,451 cm3 |