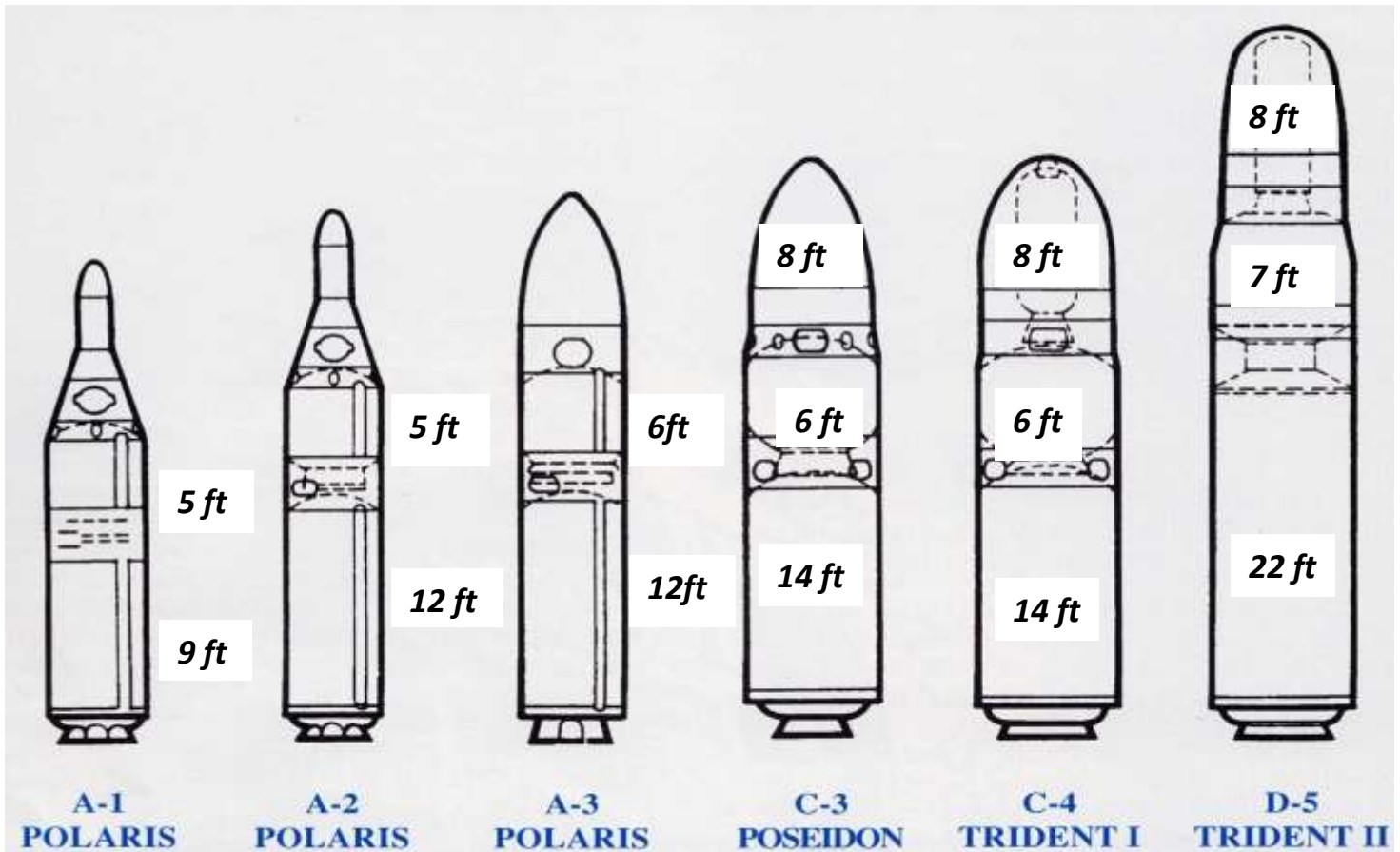


# Massive Missile Insides

The figure below shows the dimensions of the 6 Fleet Ballistic Missiles.



- Diameter for the Polaris A1, A2 and A3 is 54 inches
- Diameter for the Poseidon and Trident I is 74 inches
- Diameter for the Trident II is 84 inches

The volumes of the ballistic missiles are calculated using the lengths of the fuel chambers and the radius. The fuel chamber of the 3<sup>rd</sup> stages of the 3 latest missiles is actually one third of the diameter, so in order to find the volume of the 3<sup>rd</sup> stage divide the diameter by 3 in order to get new radius. Then calculate the volume of the 3<sup>rd</sup> staged. The volumes of each fuel chamber is then added together to get a total volume for the missile.

Use the formula for the volume of a cylinder to find the volumes of each missile. The formula for the volume of a cylinder is  $V = \pi r^2 h$ , where  $V$  is the volume,  $r$  is the radius of the cylinder and  $h$  is the height of the cylinder.

Using the information above calculate the volume of each missile.