

Question #26495

What is the volume of a triangular prism with a height of 7 inches and a base that is an equilateral triangle with sides of 6 inches?

Solution:

The volume of prism is:

$V = SH$, where: S is the square of base H is the height

Such as base is an equilateral triangle:

$S = \frac{\sqrt{3}}{4}a^2$, where a as the side of triangle.

$$V = \frac{\sqrt{3}}{4}a^2H = \frac{\sqrt{3}}{4}6^2 * 7 = 109 \text{ cubic inches}$$

Answer: 109 cubic inches.