



Problem of the Week

Problem E

Volumizing A Triangle

A rectangular prism has dimensions of $2a$, $2b$ and $2c$ as shown in the diagram below on the left.

H is the intersection of the diagonals of the top face of the prism, J is the intersection of the diagonals of the side face of the prism and K is the intersection of the diagonals of the front face of the prism. $\triangle HJK$ is formed by joining H , J and K . This is shown in the diagram below on the right.

If $HJ = 4$ cm, $HK = 5$ cm, and $JK = 6$ cm, determine the volume of the rectangular prism.

