Answer on Question #61612 – Math – Geometry

Question

A classroom is 38 ft long, 24 ft wide and 10ft high. Determine the volume and surface area.

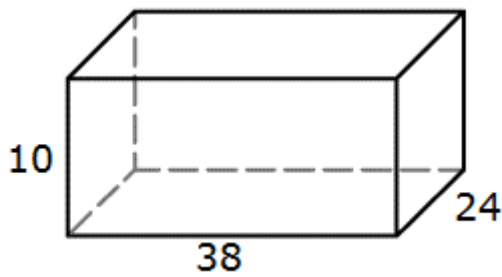## Solution

The classroom is right parallelepiped.
Volume = l · w · h
The surface area of the parallelepiped is the sum of all areas of faces, which are rectangles.
Surface Area = 2l · w + 2l · h + 2w · h
$l = 38\ ft, \qquad w = 24\ ft, \qquad h = 10\ ft.$

$V = 38 \cdot 24 \cdot 10 = 9120\ (ft^3)$
$S = 2 \cdot 38 \cdot 24 + 2 \cdot 38 \cdot 10 + 2 \cdot 24 \cdot 10 = 3064\ (ft^2).$

Answer: $9120\ ft^3, 3064\ ft^2.$