

The shape of the classroom is a parallelogram.

1) The formula of a volume of a parallelogram is:

$V = l * w * h$ , where

- $l$  is for length,
- $w$  is for width
- $h$  is for high.

We have  $l = 38$  feet,  $w = 24$  feet and  $h = 10$  feet.

So,  $V = 38 * 24 * 10 = 9120$  (feet<sup>3</sup>)

2) The surface area of a parallelogram is the sum of all side's areas, which are rectangles.

There are 6 sides. The formula for each side's area is:

$S = a * b$ , where  $a$  is length of a rectangle,  $b$  – width.

So, the surface area is  $S = 2 * S_1 + 2 * S_2 + 2 * S_3 = 2 * l * w + 2 * l * h + 2 * w * h = 1824 + 760 + 480 = 3064$  (feet<sup>2</sup>).

**Answer: the volume of the class is 9120 cubic feet and the surface area is 3064 square feet.**