

## Task 1

### Summery

In the first lecture, we learned some basic and important information about heat transport from outside to inside the buildings. For example what factors are considered for heat transport in Piacenza during the winter? Radiation of sunlight (is it directly or not!?) Opening, Ceiling, high of the building and the people who are in the building, the thickness of the walls and... And also we learned the first formula to calculate the heat transfer of the wall in an example by different factors like Delta T (different temperatures), area and... In W unit.

## Task 2

$$1) Q = KA \frac{\Delta T}{L}$$

$$Q = 0.78 * 20 * \frac{25}{0.4} = 975 W$$

$$Q = 975W$$

$$2) Q = \frac{\Delta T}{R_{wall}} \quad R_{wall} = \frac{L}{KA}$$

$$R_{wall} = \frac{0.4}{0.78 * 20} = 0.02564 \text{ } ^\circ\text{C}/W$$

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$$Q = \frac{25}{0.02564} = 975.039 W$$

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