

## Task 1 \_ Week 1

- Question:  $L=0.4\text{m}$   $A=20\text{ m}^2$   $\Delta T=25$   $k=0.78\text{ w/mk}$

1)  $Q^\circ = KA (\Delta T / L) = 0.78 \times 20 \times (25/0.4) = 975$

2)  $R_{\text{WALL}} = L/KA = 0.4/(0.78 \times 20) = 0.0256\text{ C}^\circ/\text{W}$

$Q^\circ = \Delta T / R_{\text{WALL}} = 25/0.0256 = 976.5625 \approx 977$  Rounding to higher

- Summary about the conductive heat transfer :

The transfer of energy between objects that are in physical contact. Conductive heat transfer takes place in solids because of temperature differences between various parts of the solid. Thermal energy is transferred from hotter to lower regions via vibrations of adjacent molecules or the movement of free electrons through the material.