# Geneva Smith Weekly Submission 1

Tuesday, October 8, 2019 7:32 AM

## Conductive Heat Transfer

Tuesday, October 8, 2019
7:12 AM

L= 0.4 m, A=20 m2, Delta T= 25, k=0.78 W/m

Q=kA(delta T/ L)= (0.78x 20)(25/0.4)=975 W

Rwall= L/kA= 0.4/ (0.78x 20)=0.0256
Q= Delta T/ Rwall= (25/ 0.0256)=976.5625

Heat conduction through a wall is proportional to the average thermal conductivity (k), the area (A) of the wall, and temperature difference (Delta T). Whereas, heat conduction is inversely proportional to the thickness of the wall (L), meaning the thicker the wall, the less heat is transferred.