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summery

1.Heart transfer though a wall is proportional to its Area.

2.It is propornational to the differefce of temperature and conductivity.

Conductivity: willingness of material to transfer heat.

3.IT inversely proportinal to the thickness.

Why ”the thicker the wall, the less heat goes through it” .

week1 submission

1). Simple

$$\dot{Q} = kA\frac{\Delta T}{L} = 0.78 \times 20 \times \frac{25}{0.4} = \frac{975}{\cancel{156}}\ W.$$

2) Resistance $R_{wall} = \frac{L}{kA} = \frac{0.4}{0.78\times 20} = 0.0256\ ^{\circ}C/W$

$$\dot{Q} = \frac{\Delta T}{R_{wall}} = \frac{25}{0.0256} \approx 976.6\ W.$$