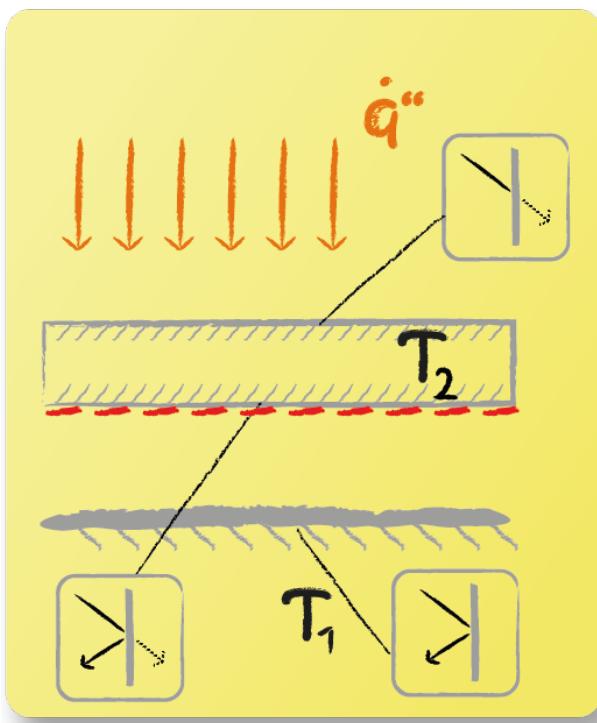


Surface Brightness: Task 30



The image shows two grey bodies. The properties of body 2's bottom and top surfaces differ from each other. While radiation arriving at the top is transmitted but not reflected, radiation on the bottom is transmitted and reflected. Bottom and top surfaces are indicated by indices b and t.

1



$$\dot{Q}_{2b} = \sigma \cdot \epsilon_{2b} \cdot A_2 \cdot T_2^4 + \tau_{2t} \cdot A_2 \cdot \dot{q}'' + \rho_{2b} \cdot \dot{Q}_1$$

2



The surface brightness of body 2's bottom surface consists of its emission, reflection of body 1's surface brightness and transmission of incoming specific radiation \dot{q}'' .