
Example

A one meter long aluminum cylinder 15.0 cm in diameter and initially at 200°C is suddenly exposed to a convection environment at 70°C and $h = 573 \text{ W}/(\text{m}^2\cdot\text{K})$.

- (a) Calculate the temperature at a radius of 1.73 cm 1 min after the cylinder is exposed to the environment.
- (b) Calculate the heat lost 1 min after the cylinder is exposed to the environment. Express your answer in J.

