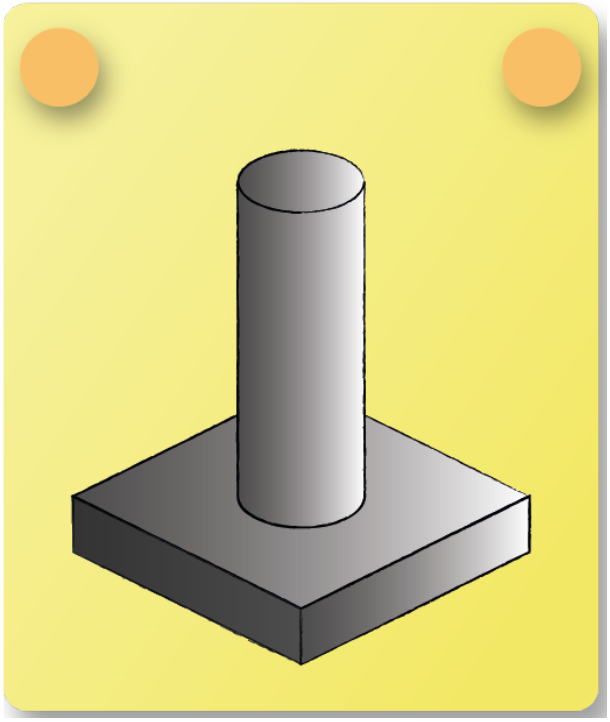
Lecture Fins Question 6



How many boundary conditions are required to solve the one-dimensional fin equation?

The one-dimensional fin equation is given to be:

$$\frac{\partial^2 T}{\partial x^2} = \frac{\alpha U}{\lambda A_C}[T(x) - T_A]$$

As it appears as a second order differential equation, two integration constants need to be determined in order to obtain a unique solution.