

## Chapter4\_example7

The diffusivity at 68 degree fahrenheit is  $5.53 \times 10^{-3}$  sq.ft/hr

The volume of the can is 0.0135 cu.ft

The surface area of the can is 0.327 sq.ft

The characteristic length is 0.041 ft

The Biot number is 0.203

For the cylinder, The Fourier number is 2.04 and Biot Number is 0.513

The reciprocal for Biot number for cylinder is 1.95

For the infinite plate, The Fourier number is 0.565 and Biot Number is 0.98

The reciprocal for Biot number for infinite plate is 1.03

The value of dimensionless temperature for short cylinder is 0.096

The temperature at centre of can is 34.0 degree celsius

The value of dimensionless temperature at the wall for short cylinder is 0.50

The wall temperature is 32.0 degree F