

Chapter4_example8

The value of $1/Bi$ for infinite plate is 19.2

The Results for different time instances:

time t , s	Infinite plate			Semi-infinite solid			Dimensionless temperature	Temperature
	$1/Bi$	Fo	$\frac{T_i - T_\infty}{T_i - T_\infty}$	$Bi\sqrt{Fo}$	$\frac{x}{2\sqrt{\alpha t}}$	$\frac{T - T_i}{T_\infty - T_i}$	$\frac{T - T_i}{T_i - T_\infty}$	T
3000	19.2	51.6	0.085	0.374	0.186	0.225	0.0056	11.4
1500	19.2	25.8	0.34	0.265	0.262	0.14	0.099	24.8
700	19.2	12.0	0.55	0.181	0.384	0.075	0.28	38.8
400	19.2	6.88	0.7	0.137	0.508	0.046	0.26	37.6
200	19.2	3.44	0.8	0.097	0.719	0.02	0.63	65.9
300	19.2	5.16	0.8	0.118	0.587	0.035	0.62	65.2
350	19.2	6.02	0.7	0.128	0.543	0.042	0.47	53.6