

In[]:=

```

$$\Delta H_{abs} = (84.68 - 0.1135 * T[z] + 0.0027 * T[z]^2) * 1000 * 0.23901;$$

$$RA = -7.297 * 10^{-14} * z^3 - 5.39 * 10^{-12} * z^2 - 8.047 * 10^{-10} * z + 1.043 * 10^{-6};$$

$$a = 1.15;$$

$$h_{pared} = 0.0014;$$

$$T_{inicial} = 24.3;$$

$$Q_v = -h_{pared} * a * (T[z] - T_{inicial});$$

$$V_z = 0.196;$$

$$\rho L = 0.056;$$

$$C_{pmezcla} = 19.352;$$

$$\Phi H = \Delta H_{abs} * RA * a;$$

```

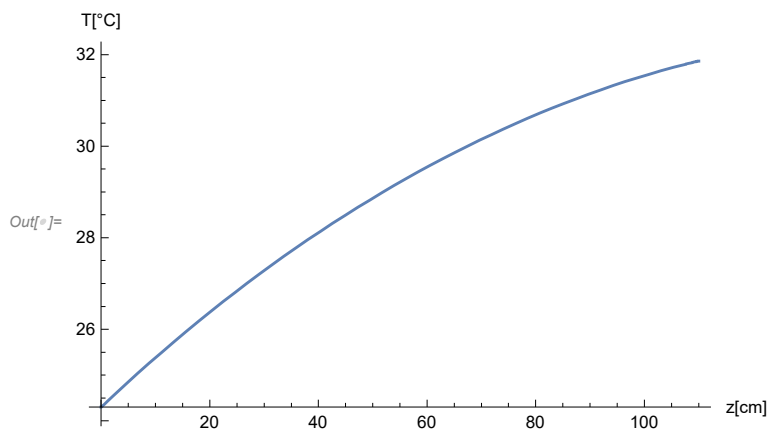
```
sol = NDSolve[  
  {T'[z] ==  $\frac{\Phi H + Q_v}{V_z * \rho L * C_{pmezcla}}$ , T[0] == T_{inicial}}, T, {z, 0, 110}]
```

```
Plot[Evaluate[T[z] /. %], {z, 0, 110}, AxesLabel -> {"z[cm]", "T[°C]"}]
```

```
TableForm[{"z" cm, "T" °C}, TableDepth -> 2]
```

```
Table[{z, T[z] /. sol}, {z, 0, 110, 10}] // TableForm
```

Out[]:= { { T -> InterpolatingFunction [Domain: {{0., 110.}} Output: scalar] } }



Out[]//TableForm=
z cm T °C

Out[]//TableForm=

0	24.3
10	25.3812
20	26.3741
30	27.2832
40	28.1125
50	28.865
60	29.5432
70	30.1488
80	30.683
90	31.1465
100	31.5392
110	31.8609