

$$r:=5\text{ }\textcolor{blue}{mm}\qquad k:=237\frac{\textcolor{blue}{W}}{\textcolor{blue}{m}\cdot\textcolor{blue}{K}}$$

$$T_0:=100\text{ }\textcolor{blue}{^\circ C}\qquad T_2:=42\text{ }\textcolor{blue}{^\circ C}\qquad T_4:=24.2\text{ }\textcolor{blue}{^\circ C}\qquad T_6:=0\text{ }\textcolor{blue}{^\circ C}$$

$$T_1:=78.3\text{ }\textcolor{blue}{^\circ C}\qquad T_3:=35.8\text{ }\textcolor{blue}{^\circ C}\qquad T_5:=12.8\text{ }\textcolor{blue}{^\circ C}$$

$$S:=\textcolor{brown}{\pi}\cdot r^2=78.54\text{ }\textcolor{blue}{mm}^2\qquad \Delta x:=800\text{ }\textcolor{blue}{mm}\qquad \Delta T:=T_6-T_0=-100\text{ }\textcolor{blue}{K}$$

$$I:=-k\cdot S\cdot\left(\frac{\Delta T}{\Delta x}\right)=2.327\text{ }\textcolor{blue}{W}$$

$$\Delta T_{0_1}:=T_1-T_0=-21.7\text{ }\textcolor{blue}{K}\qquad \Delta T_{3_4}:=T_4-T_3=-11.6\text{ }\textcolor{blue}{K}$$

$$\Delta T_{1_2}:=T_2-T_1=-36.3\text{ }\textcolor{blue}{K}\qquad \Delta T_{4_5}:=T_5-T_4=-11.4\text{ }\textcolor{blue}{K}$$

$$\Delta T_{2_3}:=T_3-T_2=-6.2\text{ }\textcolor{blue}{K}\qquad \Delta T_{5_6}:=T_6-T_5=-12.8\text{ }\textcolor{blue}{K}$$