6.7 Using the data in Table 6.1, calculate the closed cup flashpoint of n-octane. Compare your results with the vlues given in Table 6.1.

$Tb := 398 \quad xl := 0.008 \quad hfg := 0.3 \cdot 10^3 \ \frac{kJ}{kg} \quad Rgas := 8.314 \quad M1 := 12 \cdot 8 + 18$

$M1 = 114 \ \frac{kg}{kmol}$

$$T1 := \left(\frac{1}{Tb} - \frac{Rgas \cdot \ln(xl)}{hfg \cdot M1} \right)^{-1} \qquad T1 = 271.273 \ K$$

In degrees C we have

$$T\_C := T1 - 273 \qquad T\_C = -1.727 \quad C$$