<u>ME 478 Homework #8</u>

Aluminum fins can be used to remove heat from a surface as shown in Figure 1. The thermal conductivity of aluminum is 168 W/(m °C). The surface between nodes 1 and 2 is 150 °C. The convection coefficient is 30 W/(m² °C) and the fluid temperature is 20 °C. The thickness of the fin is 1 m. What are the temperatures at the 7 nodes shown in figure 1? Please show your work and draw a box around your answer to receive full credit.
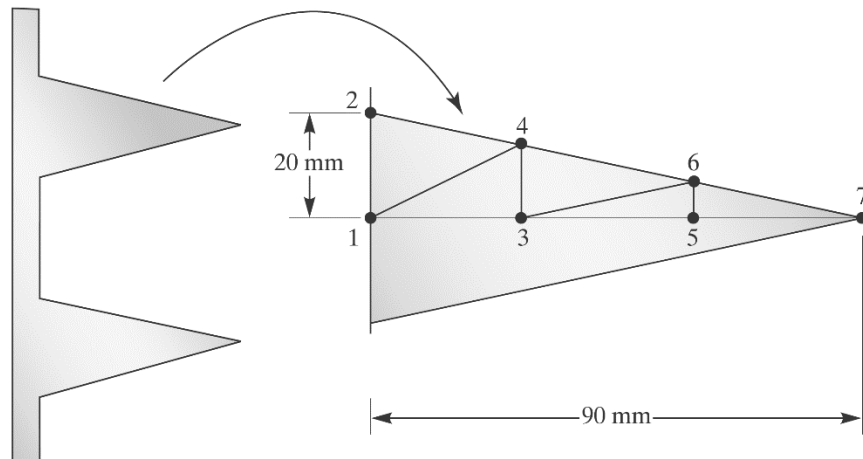

Figure 1.