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Question： Week 3 In this week's assignment you should first dfinlize the composite wall question by finding the heat transfer rate, and then solve the same question while the thickness of the brick is increased to 32 cm and comment on the results

$$R_i = R_{conv,1} = \frac{1}{h_1 A} = 0.4℃/W$$

$$R_1 = R_{foam} = \frac{L}{KA} = 4.6℃/W$$

$$R_2 = R_6 = R_{foam} = \frac{L}{KA} = 0.36℃/W$$

$$R_3 = R_5 = \frac{L}{KA} = 96.97℃/W$$

$$R_4 = \frac{L}{KA} = 2.02℃/W$$

$$R_0 = \frac{1}{h_2 A} = 0.16℃/W$$

$$\frac{1}{R_{mid}} = \frac{1}{R_3} + \frac{1}{R_4} + \frac{1}{R_5}$$

$$R_{mid} = 1.92$$

$$R_{total} = 0.4 + 4.6 + 0.36 + 1.92 + 0.16 = 7.8℃/W \quad Q = \frac{T_{\infty 1} - T_{\infty 2}}{R_{total}} = 3.85W$$