Physics 10154 - Quiz 13D

When you are exercising to burn calories, the temperature of your environment can make a different in how many calories you burn. For this problem, assume 1 food calorie = 1 kcal = 4186 Joules.

A person with a normal body temperature of 98°F has an emissivity of 0.85 and exposed skin area of 1.2 square meters.

Calculate how many Calories are burned in 1.0 hour of exercise in a room…

a)   With a temperature of 72°F.
b)   With a temperature of 60°F.