**Unit 4 – Thermo: Quiz 6b**

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1. Calculate the temperature increase of 100 kg of brake material with an average specific heat of 800 J/kg ⋅ oC if the material retains 10% of the energy from a 10,000 kg truck descending 75.0 m (***in total vertical displacement***) at a ***constant speed***.
2. A copper (α = 1.7 x 10-5 /C0) pipe is 90 m long at 200C. What is its new length when steam passes through the pipe at 1000C?

Answers:

1. Calculate the temperature increase of 100 kg of brake material with an average specific heat of 800 J/kg ⋅ oC if the material retains 10% of the energy from a 10,000 kg truck descending 75.0 m (***in total vertical displacement***) at a ***constant speed***.





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