1. Match the following - Expansion in solids (6 m.)

Match the following:

A) Temperature
B) Thermal equilibrium
C) Superficial expansion

<table>
<thead>
<tr>
<th>Average kinetic energy</th>
<th>.................</th>
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<tbody>
<tr>
<td>Expansion in area</td>
<td>.................</td>
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<tr>
<td>No heat flow</td>
<td>.................</td>
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2. Exercise on linear expansion (5 m.)

Answer the following.

1. A Solid has a area $A_1$ at temperature $T_1$. The temperature is increased to $T_2$. If $\beta$ is the coefficient of superficial expansion, the increase in area is given by ____________.

   A) $A_1\beta(T_2 - T_1)$
   B) $A_1 + A_1\beta T_2$
   C) $A_1\beta T_2$
   D) $A_1[1 + \beta(T_2 - T_1)]$

2. Some brass has a coefficient of linear expansion of $19 \times 10^{-6} \ K^{-1}$. A $600nm$ length of brass piping is heated through $20K$. The pipe extends by ______________.
3. Activity for Thermal Equilibrium  (5 m.)

Beaker A and B has water at 80 °C. Then pour the water of A and B to an empty beaker C.

Beaker A and B has water at 80°C

80°C  80°C  ?

Now, What is the A temperature of the water in the beaker C?
Neela says it will be 160°C.

**Is Neela correct?**

What is your opinion? Does Neela say correctly? Make a guess and verify it experimentally.

Write your Answer here (150 words only):

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**Important!**

This is a creative exercise. Your teacher will check it manually.
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