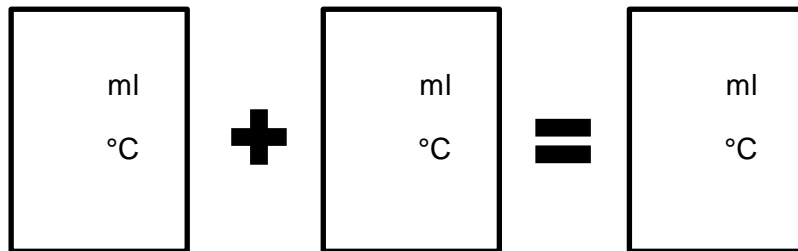


EXERCISES

Thermal capacity of liquids and solutions

- Experiment. Pour equal amounts of cool and warm water into one container.



Generalization: final temperature can be predicted as _____.

- Find the final temperature.

a.

coffee	milk	coffee drink
4 dl	4 dl	
70 °C	20 °C	

b.

coffee	milk	coffee drink
8 cl		16 cl
50 °C		30 °C

c.

coffee	milk	coffee drink
10 dl	5 dl	
50 °C	20 °C	

- Temperature changes require energy.

$$\Delta E = m \cdot c \cdot \Delta T$$

- While cooking pasta, you heat half a kilogram of water $c = 4200 \text{ J}/(\text{kg } ^\circ\text{C})$ from 20°C to 100°C . Find the energy consumption.

$$m =$$

$$c =$$

$$\Delta T =$$

- Human beings are mostly water. By how much does the temperature of a 50-kilogram human change with 105 000 joules of energy?

$$m =$$

$$c =$$

$$\Delta T =$$

$$\Delta E =$$