

Circle Recitation Time: W1:30 W2:30 H8:30 H9:30 H10:30 H12:30 H1:30 H2:30

Name: _____

Partner(s): _____

Directions : Complete the following questions based on the computer simulations. Please show all of your work and explain all of your reasoning. Place boxes around your final answers.

Simulation #1: Fluids & Archimedes' Principle

Which of the three situations (A, B, or C) is physical? Fully discuss why you think one simulation is physical realistic and why the other two simulations are not.

Physical Simulation Is	
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Simulation #2: Thermal Expansion

Determine whether all of the metal bars are made of the same material. Show your calculations and fully explain your reasoning.

Answer =	
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Simulation #3: Thermal Expansion

Two aluminum alloy bars (coefficient of thermal expansion of $25 \times 10^{-6} \text{ 1/C}^\circ$) fit together snugly until subject to a change in temperature as shown in the animation (position is in meters and time is in days).

Find that change in temperature. Show your calculations and fully explain your reasoning.

Answer =	
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