Heat

Name_____ Class_____ Date_____

1 A solid sample was heated and its **temperature increased** but it did **not** melt. Which statement best describes the **changes** in the average kinetic and potential energies of the molecules of the sample?

A Potential energy decreased and kinetic energy remained the same.
B Potential energy increased and kinetic energy remained the same.
C Kinetic energy decreased and potential energy remained the same.
D Kinetic energy increased and potential energy remained the same.

2 How are the **boiling point** of water and the **melting point** of ice affected by a **decrease in pressure**?

A The boiling point of water increases, and the melting point of ice increases.
B The boiling point of water increases, and the melting point of ice decreases.
C The boiling point of water decreases, and the melting point of ice increases.
D The boiling point of water decreases, and the melting point of ice decreases.

3 In a diesel engine, the piston compresses gases in a cylinder. Why does the **temperature** of the gases **rise** during this process?

spark plug

4 A commercial freezer vaporizes ammonia in its cooling coils to **remove heat** from an ice machine. How much ammonia at **-33°C** must be vaporized to remove **6,850**

5

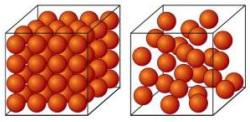
7 initially at **-10°C**. Which substance has the **largest change** in temperature?

A aluminum
B ice
C iron
D alcohol

A the specific heat of the cooler region is greater than the specific heat of the warmer region
B the temperature of the cooler region is near absolute zero
C work is done to produce the flow
D the cooler region is liquid and the warmer region is solid

9 What is the **minimum heat** required to **change** 5.0 kilograms of copper at 1083°C from a **solid to a liquid**?

A 0.20 kJ
B 0.39 kJ
C 41 kJ
D 1.0×10^3 kJ



10 **Heat** will always flow from object *A* to object *B* if object *B* has a **lower**

A mass
B total energy
C temperature
D specific heat

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