



Name _____ Class _____ Date _____

1 **Equal amounts of heat energy are given off** by 1.0-kilogram samples of aluminum, iron, platinum, and zinc, all initially at 100°C. **Which sample has the greatest decrease in temperature?**

- A aluminum
- B iron
- C platinum
- D zinc

3 The **amount of heat energy liberated** by a **sample of water** depends upon its

- A temperature change, only
- B temperature change and mass, only
- C temperature change and phase, only
- D temperature change, mass, and phase

2 While the water is boiling, what happens to the average **kinetic energy of the water molecules**? [Assume that the pressure remains constant.]

- A It decreases.
- B It increases.
- C It remains the same.



4 A pot of water is boiling. When a cook throws **salt** into the water, it **stops boiling** because the salt

- A lowers the water's specific heat
- B raises the water's specific heat



5

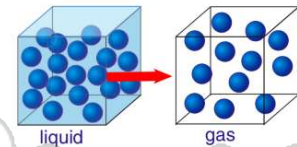


PREVIEW

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- A how much heat the warmer object can supply to the colder object
- B whether a heat exchange would take place if the objects were in contact
- C the total amount of energy the objects contain

- A aluminum
- B iron
- C platinum
- D copper



9 A 0.060 kilogram ice cube at 0.0° C is placed in a glass containing 0.250 kilogram of water at 25° C. **Which statement describes this system when equilibrium is reached?** (Assume **no external exchange of heat**.)

- A The ice is completely melted and the water temperature is above 0° C.
- B The ice is completely melted and the water temperature is 0° C.
- C Part of the ice remains frozen and the water temperature is above 0° C.
- D Part of the ice remains frozen and the water temperature is 0° C.



10 As **6.00 kilograms of liquid substance** at its freezing point completely freezes, it gives off enough heat to **melt 3.00 kilograms of ice** at 0° C. **The heat of fusion of the substance is**

- A 2.05 kJ/kg
- B 4.19 kJ/kg
- C 167 kJ/kg
- D 668 kJ/kg





ANSWER KEY

Equal amounts of heat energy are given off by 1.0-kilogram samples of aluminum, iron, platinum, and zinc, all initially at 100°C. Which sample has the greatest decrease in temperature?

- A aluminum
- B iron
- C platinum
- D zinc

(C)

While the water is boiling, what happens to the average kinetic energy of the water molecules? [Assume that the pressure remains constant.]

- A It decreases.
- B It increases.
- C It remains the same.



(C)

The amount of heat energy liberated by a sample of water depends upon its

- A temperature change, only
- B temperature change and mass, only
- C temperature change and phase, only
- D temperature change, mass, and phase

(d)

A pot of water is boiling. When a cook throws salt into the water, it stops boiling because the salt

- A lowers the water's specific heat
- B raises the water's specific heat
- C lowers the water's boiling point



(d)

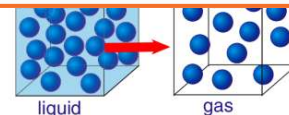


PREVIEW

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- C whether a heat exchange would take place if the objects were in contact
- D the total amount of energy the objects contain

- B iron
- C platinum
- D copper



A 0.060 kilogram ice cube at 0.0° C is placed in a glass containing 0.250 kilogram of water at 25° C. Which statement describes this system when equilibrium is reached? (Assume no external exchange of heat.)

- A The ice is completely melted and the water temperature is above 0° C.
- B The ice is completely melted and the water temperature is 0° C.
- C Part of the ice remains frozen and the water temperature is above 0° C.
- D Part of the ice remains frozen and the water temperature is 0° C.



(a)

As 6.00 kilograms of liquid substance at its freezing point completely freezes, it gives off enough heat to melt 3.00 kilograms of ice at 0°C. The heat of fusion of the substance is

- A 2.05 kJ/kg
- B 4.19 kJ/kg
- C 167 kJ/kg
- D 668 kJ/kg



(c)