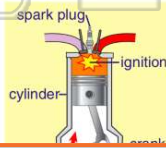




Name _____ Class _____ Date _____

- 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.

- 3 In a diesel engine, the **piston compresses gases** in a cylinder. Why does the **temperature** of the gases **rise** during this process?
- A Heat enters the cylinder from the surroundings.
 - B Heat is expelled through the exhaust system.



- 5 A
k
fi
h
A
E
C
D



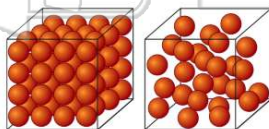
PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

- 7
- A aluminum
 - B ice
 - C iron
 - D alcohol

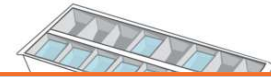


- 9 What is the **minimum heat** required to **change 5.0 kilograms of copper at 1083°C** from a **solid to a liquid**?
- A 0.20 kJ
 - B 0.39 kJ
 - C 41 kJ
 - D 1.0×10^3 kJ



- 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.

- 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 kilojoules of heat** from the ice machine?
- A 0.200 kg
 - B 5.00 kg



- 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

- 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





ANSWER KEY

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.

(d)

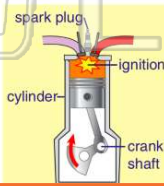
How are the **boiling point of water** and the **melting point of ice** affected by a **decrease in pressure**?

- 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.

(c)

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

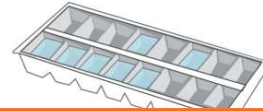
- A Heat enters the cylinder from the surroundings.
- B Heat is expelled through the exhaust system.
- C Work is done on the surroundings by the gases.



(d)

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 kJ of heat from the ice machine?**

- A 0.200 kg
- B 5.00 kg
- C 20.6 kg



(b)



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

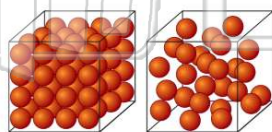
- B ice
- C iron
- D alcohol



- absolute zero
- C work is done to produce the flow
- D the cooler region is liquid and the warmer region is solid

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



(d)

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



(c)