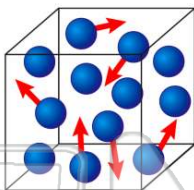




Name _____ Class _____ Date _____

1 Gas molecules at the **same temperature** are always assumed to have

- A uniform velocity
- B uniform acceleration
- C straight-line motion
- D random motion



2 Which property determines the **direction** of the **exchange of internal energy** between two objects?

- A temperature
- B specific heat
- C mass
- D density



3 Equal masses of **zinc** and **copper** at room temperature are placed in an oven that supplies heat energy at a rate of 1 kilojoule per minute. Compared to the time needed for the **zinc** sample to reach its melting point, the **time** needed for the **copper** sample to reach its **melting point** will be

- A less
- B the same
- C more

4 As the **volume** of a fixed mass of an ideal gas **increases** at constant temperature, the **product** of the **pressure** and the **volume** of the gas

- A decreases
- B increases



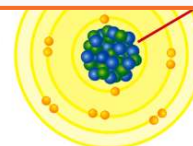
PREVIEW

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7

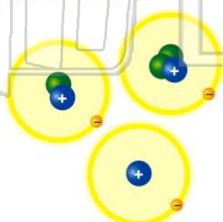
- B increases
- C remains the same

- B increase by one
- C remain unchanged
- D decrease by two



9 What is the **minimum energy** needed to **ionize** a hydrogen atom in the $n = 2$ energy state?

- A 13.6 eV
- B 10.2 eV
- C 3.40 eV
- D 1.89 eV



10 An object **can not** have a **charge** of

- A $3.2 \times 10^{-19} \text{ C}$
- B $4.5 \times 10^{-19} \text{ C}$
- C $8.0 \times 10^{-19} \text{ C}$
- D $9.6 \times 10^{-19} \text{ C}$

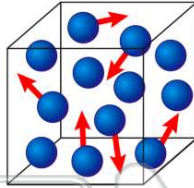




ANSWER KEY

Gas molecules at the **same temperature** are always assumed to have

- A uniform velocity
- B uniform acceleration
- C straight-line motion
- D random motion



(d)

Which property determines the **direction** of the **exchange of internal energy** between two objects?

- A temperature
- B specific heat
- C mass
- D density



(a)

Equal masses of **zinc** and **copper** at room temperature are placed in an oven that supplies heat energy at a rate of 1 kilojoule per minute. Compared to the time needed for the **zinc** sample to reach its melting point, the **time needed for the copper** sample to reach its **melting point** will be

- A less
- B greater
- C

(b)

As the **volume** of a fixed mass of an ideal gas **increases** at constant temperature, the **product of the pressure and the volume of the gas**

- A decreases
- B increases
- C remains the same

(c)

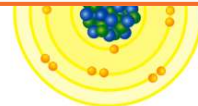


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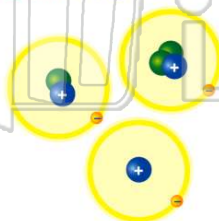
C remains the same

D decrease by two



What is the **minimum energy** needed to **ionize a hydrogen atom** in the $n = 2$ energy state?

- A 13.6 eV
- B 10.2 eV
- C 3.40 eV
- D 1.89 eV



(c)

An object **can not** have a **charge** of

- A $3.2 \times 10^{-19} \text{ C}$
- B $4.5 \times 10^{-19} \text{ C}$
- C $8.0 \times 10^{-19} \text{ C}$
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(b)