



Thermodynamics

H.S. Phys

Name _____ Class _____ Date _____

1 What do the **laws of thermodynamics** indicate about the **energy and entropy** of the universe?

Circle the answer letter.

- a. Energy is increasing and entropy is decreasing.
- b. Energy is constant and entropy is decreasing.
- c. Energy is constant and entropy is increasing.



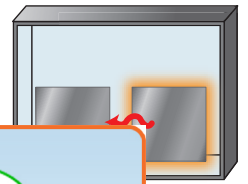
6 A 0.2-kg sample of **ethyl alcohol** is at a temperature of **28°C**. How much **heat** is needed to raise the temperature of the ethyl alcohol to its **boiling point**?

- 1.0 kcal 5.8 kcal
- 3.2 kcal 9.0 kcal



7 **Heat** will always **flow** from object A to object B if object B has a lower _____.

- a. total energy
- b. temperature
- c. specific heat



2 Which **characteristic** of a gas sample results from the **collision of gas molecules** with the walls of the container?

a. pressure

b. volume

c. mass

d. density

e. temperature

f. force

g. energy

h. acceleration

i. displacement

j. velocity

k. momentum

l. force

m. energy

n. acceleration

o. displacement

p. velocity

q. momentum

r. force

s. energy

t. acceleration

u. displacement

v. velocity

w. momentum

x. force

y. energy

z. acceleration

aa. displacement

ab. velocity

ac. momentum

ad. force

ae. energy



PREVIEW

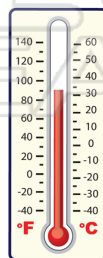
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4 In a gas, the molecules are in constant motion. Which of the following is NOT a characteristic of the molecules?

- a. volume of the molecules.
- b. disorder of the molecules.
- c. forces of attraction between the molecules.

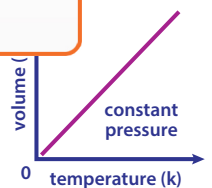
5 Circle the answer below. A temperature change of **51 Celsius degrees** would be **equivalent to** a temperature change of _____.

- 222 K 51 K 324 K 222 K



10 When a car is driven over snow, the **snow under the tires may melt** because the

- a. snow loses heat energy to the tires.
- b. pressure of the tires raises the melting point of the snow.
- c. pressure of the tires lowers the melting point of the snow.





Thermodynamics - Answer Key

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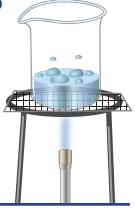
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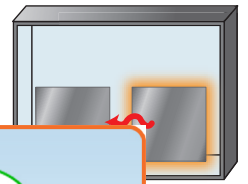
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2 Which **characteristic** of a gas sample results from the **collision of gas molecules** with the walls of the container?



3 Volume of a gas increases at constant temperature if the pressure is decreased.

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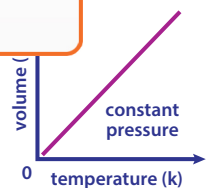
PREVIEW

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4 In a gas, the forces of attraction between the molecules are very weak. Which of the following is a characteristic of a gas?

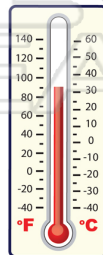
- a. volume of the molecules.
- b. disorder of the molecules.
- c. forces of attraction between the molecules.

- a. decreases
- b. increases
- c. remains the same



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- 222 K
- 51 K
- 324 K
- 222 K



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