

Questions of the Day Set #9

#98

Given the same conditions of temperature & pressure, which noble gas will diffuse most rapidly?

- (A) He (B) Ne (C) Ar (D) Kr

#100

Given the equation: $C_3H_8 + O_2 \rightarrow CO_2 + H_2O$
How many grams of propane should be used to completely react with 30.5 liters of O_2 ?

- (A) 6.10 (B) 8.41 (C) 12.0 (D) 153

#102

Approximately how many Joules of heat are required to change the temperature of 25.5 grams of water from $37.0^\circ C$ to $45.8^\circ C$?

- (A) 453 J (B) 460 J (C) 938 J (D) 224 J

#104

A mixture of gases (NO_2 , CO_2 , SO_2) is collected in a bottle. The partial pressure of NO_2 is 1.25 atm, and the partial pressure of CO_2 is 2.63 atm. If the total pressure of the gases is 11.20 atm, what is the partial pressure of SO_2 ?

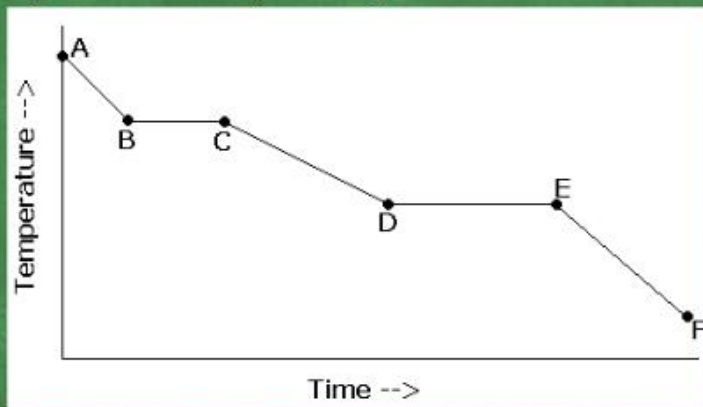
- (A) 2.89 atm (B) 7.32 atm
(C) 9.23 atm (D) 11.20 atm

#106

The graph below represents the uniform cooling of a substance, starting with the substance as a gas above its boiling point.

During which interval is the substance completely in the liquid phase?

- (A) AB (B) BC
(C) CD (D) DE



#108

By how many degrees will the temperature of 45.8 grams of water change when 1775 Joules of heat are added to it?

- (A) 4.67°C (B) 9.27°C (C) 18.9°C (D) 19.2°C