

Which of the following statements is true of combustion reactions? A. Hydrogen gas (H₂) must be one of the reactants

B. Water (H₂O) is always a product

C. Energy is released by the reaction

D. Carbon monoxide (CO₂) is always produced

Gasoline contains C and H atoms. During combustion, the carbon (C) from the fuel combines with oxygen (O₂) from the air to produce carbon dioxide (CO₂).
 $2 \text{C}_8\text{H}_{18} + 25 \text{O}_2 \rightarrow 16 \text{CO}_2 + 18 \text{H}_2\text{O}$.

Combustion reactions release large amounts of heat. They have negative enthalpy. A negative enthalpy represents an exothermic reaction, releasing heat. This reaction is spontaneous and exothermic, since we can obtain energy from the reaction; the ΔG (free energy) is negative (So 1 is true).

$\Delta G < 0$, so the free energy of the system decreases with the reaction. Remember that when there is a negative ΔG the reaction goes from higher free energy to lower free energy, like in this case.

Answer: Option (B) is the correct answer.

Explanation:

A chemical reaction in which a hydrocarbon combines with oxygen atom that is present in air to yield carbon dioxide and water along with the products.

For example,

Here, methane undergoes combustion reaction to yield carbon dioxide and water as the products.

Hence, we can conclude that the statement water () is always a product, is true of combustion reactions.

Sal has poor social skills, which are interfering with his ability to make friends at school. his therapist demonstrates correct and appropriate social skills for him and then encourages sal to mimic them. the learning of social skills eventually occurs and is all a result of sal watching his therapist and then practicing the new skills with him. this technique is referred to as _____

Bret has a fish tank that holds 320 fluid ounces of water. On average, the water evaporates from the tank at a rate of 3.84 ounces per day. Bret went on vacation for 2 weeks, and asked a friend to feed his fish. The fish tank was full of water when Bret left. To the nearest hundredth, how many fluid ounces of water were left in the tank when Bret returned from his vacation

Does money bring happiness in the Great Gatsby, destroy happiness or have no effect?

Wang Yong owes the bank \$8500. To repay the debt, he paid a fixed amount back to the bank each month. After 12 months, his remaining debt was \$6460. How much did Wang Yong pay each month?

How long did it take Wang Yong to pay back his entire debt?

According to the Dukes system, a tumor that has penetrated muscular tissue of the colon, but hasn't involved nodes, would be classified as

Which of the following statements is true of? expenses? A. Expenses increase? equity, so an expense? account's normal balance is a debit balance. B. Expenses decrease? equity, so an expense? account's normal balance is a credit balance. C. Expenses increase? equity, so an expense? account's normal balance is a credit balance. D. Expenses decrease? equity, so an expense? account's normal balance is a debit balance.

Which formula can be used to describe the sequence? $-2 \frac{2}{3}$, $-5 \frac{1}{3}$, $-10 \frac{2}{3}$, $-21 \frac{1}{3}$, $-42 \frac{2}{3}$.

A: $f(x + 1) = -2f(x)$

B: $f(x + 1) = -1/2 f(x)$

C: $f(x + 1) = 1/2 f(x)$

D: $f(x + 1) = 2f(x)$

Russell runs $\frac{9}{10}$ mile in five minutes. How many miles does he run in one minute

The length of a rectangle is 9 centimeters less than four times its width. Its area is 28 square centimeters. What is the dimensions of the rectangle What is the width?

Many people in both Haiti and the US reacted negatively to the US intervention in Haiti. What could the US have done to avoid this reaction? A.)The US could have used less force to exert its influence.

B.)The US could have tried to hurt, rather than help, Haiti.

C.)The US could have assisted the violent rebel groups.

D.)The US could have worked to weaken Haiti's economy.

With respect to the earth as a system, the hydrosphere is concerned with: A) air.

B) rocks.
C) vegetation.
D) water.

Meaning "all land," is the name of the great landmass that existed millions of years ago

Sally has 5 red? flags, 3 green? flags, and 4 white flags. how many 12?-flag signals can she run up a flag? pole

Enter the sum of numbers as a product of their gcf. $42 + 48$ the sum of the numbers as a product of their gcf is

Find the y-intercept and slope for the linear function $y = 7x - 6$

Which sentence in the excerpt best shows the lack of interest of white Americans in the lives of African Americans and other minorities? a: Publishing houses and theatrical promoters are in business to make money.

b: They shy away from romantic stories about Negroes and Jews because they feel that they know the public indifference to such works, unless the story or play involves racial tension.

c:It can then be offered as a study in Sociology, with the romantic side subdued

d:Sympathetic as they might be, they cannot afford to be crusaders.

Questions about New York: why the colony was founded, who founded the colony, what natural resources the colony was known for, hardships the colony had to overcome, how the colony was governed.

Which of the following is true? Tangent is negative in Quadrant I.

Sine is negative in Quadrant II.

Cosine is negative in Quadrant III.

Sine is positive in Quadrant IV.

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