

Correctly order the steps necessary to calculate the mass of product formed in a chemical reaction given the masses of all reactants

- 1) write down balanced chemical reaction.
- 2) calculate the number of moles of a reagents.
- 3) determining molar ratios - identify the number of moles of each reactant needed to form a certain number of moles of each product.
- 4) from number of moles of each product calculate mass of products using molar mass.

Answer : The order of steps necessary to calculate the mass of product formed in a chemical reaction given the masses of all reactants :

- (1) Determine the number of moles of each reactant by dividing its mass by its molar mass.
- (2) Identify the limiting reactant as the reactant that produces the least amount of product.
- (3) Determine the amount of product that could be formed from the limiting reactant using appropriate mole ratio.
- (4) Determine the mass, multiply the number of moles of product formed (from the limiting reactant) by the molar mass of the product.

For example :

If we are given that 10 grams of magnesium react with 6 grams of oxygen to give magnesium oxide then calculate the mass of product formed in a chemical reaction.

Solution :

Mass of Mg = 10 g

Mass of = 6 g

Molar mass of Mg = 24 g/mole

Molar mass of = 32 g/mole

Molar mass of MgO = 40 g/mole

First we have to calculate the moles of Mg and .

Now we have to calculate the limiting and excess reagent.

The balanced chemical reaction is,

From the balanced reaction we conclude that

As, 1 mole of react with 2 mole of

So, 0.1875 moles of react with moles of

From this we conclude that, is an excess reagent because the given moles are greater than the required moles and is a limiting reagent and it limits the formation of product.

Now we have to calculate the moles of

From the reaction, we conclude that

As, 1 mole of react to give 2 mole of

So, 0.1875 moles of react to give moles of

Now we have to calculate the mass of

Hence, the mass of product is 15 grams.

Read the passage from The Odyssey - Elpenor. By night
our ship ran onward toward the Ocean's bourne,
the realm and region of the Men of Winter,
hidden in mist and cloud. Never the flaming
eye of Helios lights on those men
at morning, when he climbs the sky of stars,

nor in descending earthward out of heaven;
ruinous night being rove over those wretches.

For Odysseus and his men, the loss of Helios, the sun, symbolizes a loss of

death.

fear.

hope.

power.

A hydrogen electron is elevated from level 1 to level 2. Another electron is elevated from level 2 to level 4. The transition requiring the greatest energy change is level 1 to level 2/level 2 to level 4/both require the same amount of energy

Are deadly man made viruses possible?

What is the current greatest threat to agricultural sustainability? a.

erosion

b.

water pollution

c.

air quality

d.

all of the above

ps it is for sure not D.

cine poate sami faca o prezentare sau o descriere pentru o fata cu numele eugenia poate sa rimeze da sa fie frumoasa si creativa promit coroana mersi frumos

Michael hates math. whenever he is assigned a page full of problems for homework, he completes the first three or four problems and then gives up. he already knows he's going to get them all wrong anyway. what type of factor is influencing michael's behavior?

What was Joseph Stalin's main goal for the Soviet Union

Round 75.4614 to the nearest thousandth

Poem about people should not be

judged on their

race, religion, or

the way they

look.

PLEASE HELP!! I NEED AN ANSWER NOW!!! David has an image of a moving bike. He wants to make it appear as if the bike is moving in the opposite direction as the original. What can he do to achieve this

In two paragraphs, write about the separation of powers and how the ideas of the separation of powers support those in the preamble.

What is détente? A. easing of strained foreign relations

- B.ramping up of military efforts
- C. strengthening of strained foreign relations
- D. strengthening of trade embargoes ?

Which of the following best describes a Lewis base? A.It donates protons in solution.

B.It accepts protons in solution.

C.It donates electrons in solution.

D.It accepts electrons in solution.

Find the center and radius for the circle, given the equation: $X^2 + Y^2 + 4x - 10y = 7$

How does "The Black Snake" sound when read aloud? A. Somber

- B. Serious
- C. Playful
- D. Regal

A real estate agent works on 7% commission. What is her commission on a house that she sold for \$210,600?

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$2x^2 - 6x - 8 = 0$ by factoring

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