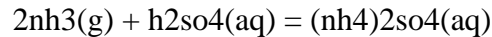


The fertilizer ammonium sulfate, $(\text{NH}_4)_2\text{SO}_4$, is prepared by the reaction between ammonia (NH_3) and sulfuric acid: $2\text{NH}_3(\text{g}) + \text{H}_2\text{SO}_4(\text{aq}) \rightarrow (\text{NH}_4)_2\text{SO}_4(\text{aq})$ how many kilograms of NH_3 are needed to produce 3.60×10^5 kg of $(\text{NH}_4)_2\text{SO}_4$?

The chemical reaction would be:



To determine the ammonia needed, we use the given amount of the product to be produced and use the chemical equation to relate the substances. We do as follows:

$$3.60 \times 10^5 \text{ kg } (\text{NH}_4)_2\text{SO}_4 \left(\frac{1 \text{ kmol}}{132.14 \text{ kg}} \right) \left(\frac{2 \text{ kmol NH}_3}{1 \text{ kmol } (\text{NH}_4)_2\text{SO}_4} \right) \left(\frac{17.04 \text{ kg}}{1 \text{ kmol}} \right) = 92846.98 \text{ kg NH}_3 \text{ needed}$$

An isolated, parallel-plate capacitor carries a charge Q . If the separation between the plates is doubled, the electrical energy stored in the capacitor will be: a. Unchanged. b. Halved. c. Doubled. d. Quartered. e. Quadrupled.

What was ONE important outcome in the Atlanta Campaign of 1864? Question 9 options:

the surrender at Appomattox

the fall of Vicksburg, Mississippi

the re-election of President Abraham Lincoln

the immediate capture of the city of Savannah, Georgia

Select the correct answer What opinion about Russian society does Leo Tolstoy express in this excerpt from The Death of Ivan Ilyich?

The awful, terrible act of his dying was, he could see, reduced by those about him to the level of a casual, unpleasant, and almost indecorous incident (as if someone entered a drawing room defusing an unpleasant odour) and this was done by that very decorum which he had served all

his life long. He saw that no one felt for him, because no one even wished to grasp his position. Only Gerasim recognized it and pitied him. And so Ivan Ilyich felt at ease only with him. He felt comforted when Gerasim supported his legs (sometimes all night long) and refused to go to bed, on't you worry, Ivan Ilyich I'll get sleep enough later on," or when he suddenly became familiar and exclaimed: "If you weren't sick it would be another matter, but as it is, why should I grudge a little trouble?" Gerasim alone did not lie, everything showed that he alone understood the facts of the case and did not consider it necessary to disguise them, but simply felt sorry for his emaciated and enfeebled master. Once when Ivan Ilyich was sending him away he even said straight out "We shall all of us die, so why should I grudge a little trouble?" expressing the fact that he did not think his work burdensome, because he was doing it for a dying man and hoped someone would do the same for him when his time came

A.
The peasant class in nineteenth-century Russia was full of honest and compassionate people

B.
Educated professionals gained influence in Russian society in the nineteenth century

C.
In the nineteenth century, middle-class Russians were rich and well-educated.

D.
Peasants more readily accepted unpleasant facts of life, while the middle class tried to deny them

What must be the potential difference across the plates of the capacitor filled with a dielectric so that it stores the same amount of electrical energy as the empty capacitor?

How is work of the future different from the work of today or the past?

On gasoline powered boats, when should the blower be activated

The new morals and manners of the 1920s were reflected in a. women's fashions. b. the great migration. c. the new factory jobs. d. politics. user: the key to the new consumer economy of the 1920s was the availability and use of: a. the automobile c. electricity b. the refrigerator d. coal

PLEASE HELP!! The unknown concentration of NaOH was determined by titration with HCl. The following data was collected: mL NaOH = 34.8 mL mL of HCl used = 29.6 mL concentration of HCl = 0.19 M What is the concentration of the NaOH? 0.16 M 0.22 M 4.5 M 6.3 M

Jenni wants to start a print shop making specialty papers and cards. Which economic question has she answered?

How did other nations come to the aid of the Americans

Knowledge of human genes gained from research on the structure and function of human genetic material has led to improvements in medicine and health care for humans. Identify one specific concern that could result from the application of this knowledge

"I need you in my life, in my life..." analyze this quote

Why is understanding the bacteria communication important for humans?

The interactions between biomolecules are often stabilized by weak interactions such as hydrogen bonds. How might this be an advantage to the organism?

Contestants in a game show are each given three pairs of numbers (for example, 2-3, 5-6, and 6-1). A person in the audience is randomly selected to roll two dice, one white and one red, where white symbolizes the first number in the pair and red the second number. What is the probability that each player has of winning?

In your informative speech on the development of the human child, you explain that by age three most other mammals are already independent and almost fully adults. Human babies, on the other hand, are still very much dependent on their mothers. This explanation is an example of a _____. Group of answer choices

Which type of sentence is classified as an independent clause? A. compound sentence

B. complex sentence

C. simple sentence

D. complete sentence

Tom has been given 35 chores to complete today this morning he finished seven of them how many chores does he now have left to do

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