

**If the mass of the earth and all objects on it were suddenly doubled, but the size remained the same, the acceleration due to gravity at the surface would become**A) 1/2 of what it now is.B) 2 times what it now is.C) 1/4 of what it now is.D) the same as it now is.E) 4 times what it now is.

Answer:

B) 2 times what it now is

Explanation:

The acceleration due to gravity at the surface of the Earth is given by

where

G is the gravitational constant

M is the mass of the Earth

R is the Earth's radius

In this problem, the mass of the Earth is doubled:

$$M' = 2M$$

while the radius remains the same:

$$R' = R$$

so the new acceleration due to gravity would be

so, the acceleration due to gravity would become twice the current value.

Note also that the value of  $g$  does not depend on the mass of the objects involved.

A variety of rice created by Biocrop Inc. through recombinant DNA technology was found to be rich in both carbohydrates and proteins. After the success of this rice variety, recombinant DNA technology was implemented by less-developed countries to increase the nutrient levels of fruits, pulses, and greens in order to feed their malnourished children. This is an example of \_\_\_\_\_.

A 230 g sample of a compound contains 136.6 g of carbon, 26.4 g of hydrogen, and 31.8 g of nitrogen. The rest is oxygen. What is the mass percent of oxygen in the compound? 11.48%

Which orbital is the first to fill with electrons in a given principal energy level?

Molecules that contain two polar bonds are \_\_\_\_\_ .

A. sometimes ionic

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B. always non polar

C. always polar

D. sometimes polar

American colonial vulnerability was commonly depicted through images of

How is citizenship related to voting

What is the denotation of the word home?

Samantha is a nontraditional student who has decided to return to school. She is employed full time and is a single parent. She has overcome challenges in her life and is demonstrating determination, resilience, and focus on her goals. Samantha is demonstrating \_\_\_\_\_. Group of answer choices a. readiness b. grit c. mindset d. intention

The transfer of energy from objects with higher temperatures to objects with lower temperatures is defined as which of the following? A. dispersal B. heat subduction C. gradient transfer

Is shaving cream a constant for making fake snow?

U get 71 pts!

Why is a river a gift to a desert land?

Sue has a breathing problem. The doctors have diagnosed that the small airways in her lungs have narrowed. Sue is suffering from ?

Mario's watch runs fast . In 1 day , it gains an hour. So in 12 days it gains 12 hours and is correct again . Julio's watch also runs fast. In 1 day , it gains 20 minutes. Suppose they both set their 12 hour watches correctly at 9:00 A.M on Monday. When will their watches next show the correct time together?

A clothing store is having a sale on holiday socks. Each pair of socks costs  $x$  dollars. You leave the store with 6 pairs of socks and spend a total of  $(6x-14)$  dollars. You pay with \$40. How much change do you receive?

Rose uses instant lemonade powder to make 7 pitchers of lemonade. She uses  $\frac{2}{8}$  cup of powder for each pitcher. What is the total amount of powder that Rose uses?

A  $\frac{2}{56}$  B  $\frac{14}{56}$  C  $\frac{9}{8}$  D  $\frac{14}{8}$  cups?

If the markup is 20% and the selling price is \$45.00, what is the initial price

What are three state institutions which deal with human rights violation?

in which sealed container would the organisms be able to continuously cycle  $O_2$  and  $CO_2$  gases? a. a jar with a lizard eating a snail b. a room with mice eating moldy grain c. a jar with snails crawling on living plants d. a room with a cat chasing a mouse

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