

**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.

what type of organism would you expect to see in an area that recently experienced a volcano eruption?

Which components of DNA are referred to as the genetic code?

The table below shows the distance a train traveled over time. How can you determine the equation that represents this relationship? Time (s) Distance (m)

2 25

4 50

6 75

8 100

I don't understand this

If a person has had unprotected sex and, within a few weeks, develops flu-like symptoms that include sore muscles and joints and swollen lymph nodes, what is the BEST reaction? a. It is probably just the flu and nothing to worry about.

b. Panic. All signs indicate that it is an HIV infection.

c. It could be the flu, but it could also be an HIV infection. It is very important to be tested at a medical facility.

d. none of the above

Please select the best answer from the choices ...

What is a market and a place where people meet and debate?

Ronnie played the piano and his sister sang a solo how do you correctly punctuate?

Who developed the Virginia Plan, which provides the basic framework and central ideas of the constitution?

$0.02 \times 0.7$  what is the answer? How do you do it?

Why do invasive species pose such a threat?

An aqueous solution containing 35.9 g of an unknown molecular (nonelectrolyte) compound in 150.0 g of water has a freezing point of  $-1.3^\circ\text{C}$ . Calculate the molar mass of the unknown compound.

The metamorphosis : the first sentence of this story is quite famous in literature. however, over the years since its first translation, many voices in academia have complained that the word "insect" does not fairly translate kafka's original meaning. offer your own interpretation of this debate. why do many critics dislike the original translation

In 1931, Japanese military commanders \_\_\_\_\_.

When does the blastocyst form?

When the first two political parties developed, what issue divided them most clearly?

Market Research is necessary to discover the potential success of new and existing products. True False

Which of the following is a social problem that the nation faced at the end of the Civil War? A. Deciding who the next president of the Confederate States of America would be B. Deciding which states would be free states and which would be slave states C. The existence of four million freed slaves without money,

education, or job skills D. Figuring out how to bring the Southern states back into the Union

How is breaking down barriers a good title

Which of the following lists shows all the factors of 36? 2, 3, 4, 6, 9, 12, 18 1, 2, 3, 4, 9, 12, 18, 36 1, 2, 3, 4, 6, 9, 12, 18, 36 36, 72, 108, ...

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