

Activity Worksheet

Challenging brain

Sub : Science

Grade: IX

Date:

Name:

ID No.....

Word Box

Topic: Universal law of gravitation

Directions: Complete the paragraph below by writing the words from the word box on the spaces provided. Be sure to spell each word correctly.

vector	size	four times	attracts
doubled	force	masses	nature
centres	halved	doubled	square

Every body in the universe _____ every other body with a _____ which is directly proportional to the product of their _____ and inversely proportional to the _____ of the distance between them. The constant is universal in the sense because it is independent of the _____ and _____ of bodies, the space where they are kept and the time at which the force is considered. It is, therefore, a universal constant.

The force of gravitation is a _____ quantity and it acts along the line joining the _____ of mass of the two bodies.

- If the distance between the two particles is _____, then the gravitational force becomes one-fourth.
- If the distance between the two particles is _____, then the gravitational force becomes four times.
- If one mass is doubled, the force of gravitation is _____.
- If both masses are doubled, the force of gravitation becomes _____.