

Comparison Factor

Questions

(Student Version)

Name: _____

47

Date: _____

Hour/Period: _____

Now that you know the comparison factors, you can use this information to calculate what would happen on the Moon. For example, you can now calculate your weight on the Moon using your weight here on Earth and multiplying it by the comparison factor. So, if you weighed 100 lbs., you would calculate $100 \times 0.1656 = 16.56$ lbs.

1. What is your weight on the Moon?
2. Weigh your science textbook. Calculate the weight of your science textbook on the Moon.
3. Calculate your age according to Moon years.
4. Calculate the age of a friend or relative according to Moon years.
5. How many Moon days equal five Earth days?

You can also go in the opposite direction, from Moon to Earth. For example, suppose you knew that you weighed 16.56 lbs on the Moon. To convert this to Earth pounds, take the Moon weight and divide by the conversion factor. So $16.56 \div 0.1656 = 100$, which means you would weigh 100 lbs. on Earth.

1. If someone weighed 10 lbs. on the Moon, how much would that person weigh on Earth?
2. If someone is 12 Moon-years old, how old would this person be in Earth years?
3. If you had 405 Moon days, how many Earth days would this be?