

# Calculate Your Weight on Other Worlds



Mercury is the smallest planet, and the planet closest to the sun.  
The gravity of Mercury is 38% of Earth's gravity.  
To calculate your weight on Mercury, multiply your weight by 0.38.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \text{(Multiply by)} = \frac{\text{Your weight on Mercury}}{\text{(units - lbs or kg)}}$$



Venus is known as the "Cloudy Planet" because it is covered with thick, yellow clouds.  
The gravity of Venus is 90% of Earth's gravity.  
To calculate your weight on Venus, multiply your weight by 0.9.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \text{(Multiply by)} = \frac{\text{Your weight on Venus}}{\text{(units - lbs or kg)}}$$



The Earth's moon is the only heavenly body that people have walked on.  
The gravity of the moon is 17% of Earth's gravity.  
To calculate your weight on the Moon, multiply your weight by 0.17.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \text{(Multiply by)} = \frac{\text{Your weight on the Moon}}{\text{(units - lbs or kg)}}$$



Mars is known as the "Red Planet" because the soil is filled with orange-red particles.  
The gravity of Mars is 38% of Earth's gravity.  
To calculate your weight on Mars, multiply your weight by 0.38.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \text{(Multiply by)} = \frac{\text{Your weight on Mars}}{\text{(units - lbs or kg)}}$$



Jupiter has more moons than any other planet. So far, scientists have discovered 63!  
The gravity of Jupiter is 234% of Earth's gravity.  
To calculate your weight on Jupiter, multiply your weight by 2.34.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \text{(Multiply by)} = \frac{\text{Your weight on Jupiter}}{\text{(units - lbs or kg)}}$$



Saturn is known as the “Ringed Planet” because it has colorful rings made of rock and ice. The gravity of Saturn is 108% of Earth's gravity. To calculate your weight on Saturn, multiply your weight by 1.08.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \frac{\text{(Multiply by)}}{\text{(Your weight on Saturn)}} = \frac{\text{(units - lbs or kg)}}{\text{(units - lbs or kg)}}$$



Uranus spins sideways. It's north pole and south pole are on the sides. The gravity of Uranus is 80% of Earth's gravity. To calculate your weight on Uranus, multiply your weight by 0.8.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \frac{\text{(Multiply by)}}{\text{(Your weight on Uranus)}} = \frac{\text{(units - lbs or kg)}}{\text{(units - lbs or kg)}}$$



Neptune is a blue planet with extremely strong winds. The gravity of Neptune is 112% of Earth's gravity. To calculate your weight on Neptune, multiply your weight by 1.12.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \frac{\text{(Multiply by)}}{\text{(Your weight on Neptune)}} = \frac{\text{(units - lbs or kg)}}{\text{(units - lbs or kg)}}$$



Scientists no longer consider Pluto a planet. It's now considered a “Dwarf Planet.” The gravity of Pluto is 7% of Earth's gravity. To calculate your weight on Pluto, multiply your weight by 0.07.

$$\frac{\text{Your Weight on Earth}}{\text{(units - lbs or kg)}} \times \frac{\text{(Multiply by)}}{\text{(Your weight on Pluto)}} = \frac{\text{(units - lbs or kg)}}{\text{(units - lbs or kg)}}$$

How much more would you weigh on Jupiter than Earth? Show your work.

answer: \_\_\_\_\_

How much less would you weigh on Pluto than Earth? Show your work.

answer: \_\_\_\_\_

Would you weigh more on the Earth's moon, or on Mercury?

answer: \_\_\_\_\_