

Exercise NMCGJ:

Converting Weight on Planets



Your weight on Earth depends on the gravitational pull that the earth is exerting on you. The moon is roughly $\frac{1}{4}$ the size of Earth, so the moon's gravity is much less than the earth's gravity, 83.3% (or $\frac{5}{6}$) less to be exact. This means that your weight on the moon is $\frac{1}{6}$ of your weight on Earth. Different conversion factors apply for different planets (or similar heavy celestial bodies like the moon).

Problem

Make a program that reads somebody's weight on Earth, and shows an overview of the corresponding weights on the planets Mercury, Venus, Mars, Jupiter, and Saturn, respectively. Use the following conversion table.

Planet	Weight factor
Mercury	0.4
Venus	0.9
Mars	0.4
Jupiter	2.4
Saturn	1.1

Make a class, `Planet`, that provides the functionality of converting a weight on Earth to the weight on a given planet, and vice versa.

Make another class, `WeightConverter`, that gives an overview of somebody's weight on the different planets using the class `Planet`. For simplicity you can just implement this in the `main` method.