

Gravity in the Solar System

These tins have been weighted according to what they would feel like on other planets.

Which tin is which planet?

Which ones are the moon and the sun?

Which one is a little heavier than Earth, which one is a little lighter than Earth and what planets could these be?

Answers overleaf...

Answers

Which tin?	Planet	Gravity	Relative (Earth = 1)	Feels like
A	Jupiter	23.12	2.359	990g
B	Earth	9.8	1	420g
C	Mars	3.71	0.379	160g
C	Mercury	3.7	0.378	160g
D	Venus	8.87	0.905	380g
D	Saturn	8.96	0.914	380g
D	Uranus	8.69	0.887	370g
E	The Moon	1.622	0.166	70g
F	Pluto	0.6	0.061	30g
G	Neptune	11	1.122	470g
H	The Sun	274	27.959	11,740g

What we think of as 'weight' (kg, g etc) is actually a measure of mass.

The weight of an object is the result of multiplying mass by acceleration due to gravity.

$$F = ma$$

Weight is measured in 'Newtons'.

The gravitational pull of a planet, or other celestial body, is dependant on the mass of it and the distance from it.

The gravitational pulls of Saturn & Uranus are similar to Venus because they have a similar mass.

Pluto

Neptune

The Sun

Jupiter

Earth

Mercury and Mars

Venus, Saturn, Uranus

The Moon

Jupiter

Mercury &
Mars

Earth

Venus,
Saturn,
Uranus

The Moon

Pluto

Neptune

The Sun