**The strength of gravity on different places in the Solar System is given in the table below.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Strength of gravity (***g***) on the surface, in **Newtons per Kilogram** (N/kg) | | | | | | | | |
| **Mercury**  http://www.constellations-and-backyard-stargazing.com/images/mercury3.jpg | **Venus**  http://www.solstation.com/stars/venus.gif | **Moon**  http://hyperphysics.phy-astr.gsu.edu/hbase/solar/picsol/PIA00405.jpg | **Mars**  http://quest.nasa.gov/mars/background/images/mars.gif | **Jupiter**  http://www.fastroc.150m.com/planetJupiter.jpg | **Saturn**  http://cosmographia.googlecode.com/svn-history/r621/trunk/data/gallery/saturn.png | **Uranus**  http://images.nationalgeographic.com/wpf/media-live/photos/000/429/cache/bright-spot-of-uranus_42912_600x450.jpg | **Neptune**  http://upload.wikimedia.org/wikipedia/commons/0/06/Neptune.jpg | **Pluto**  http://earthspacenews.com/wp-content/uploads/2014/01/Pluto.jpg |
| **3.8** | **8.8** | **1.6** | **3.7** | **23.1** | **9.0** | **8.7** | **11.0** | **0.6** |

Use the formula **weight = mass x *g*** to answer the questions below.

1. **How much would a 10 kg suitcase weigh on the surface of…?**
   1. The Moon
   2. Mars
   3. Saturn
   4. Pluto
2. **How much would a 25 kg suitcase weigh on the surface of…?**
   1. Mercury
   2. Venus
   3. Jupiter
   4. Uranus
3. **What would be the mass of a 10 kg suitcase be on…?**
   1. Mercury
   2. Venus
   3. Neptune
4. **If you were sitting, on which place in the above table would it be easiest to stand up? Why?**
5. **On which place from the table above would you have…?**
   1. The most weight
   2. The most mass
6. **If you stood on Mars and lifted a 15 kg pack, you would be pulling with a force greater than…?**
7. **If a 60 kg person was standing on a platform at the surface of Saturn and they jumped, they would have to push with a force greater than…?**
8. **The Curiosity rover on Mars currently has a weight of 3,330 N. What is its mass?**
9. **A person with mass of 60 kg standing on the dwarf planet Ceres would weigh 16.2 N. What is the strength of gravity on the surface of Ceres?**
10. **Jupiter is made of gas (like Saturn, Uranus and Neptune). What would happen to the strength of gravity if you...?**
    1. Moved away from Jupiter
    2. Fell in to Jupiter