

Earth on a String

Assume the Earth is a sphere with a radius of 64 000 km. You wrapped a string around the Earth. Now an extra 20 metres was added to the string. The string was then positioned an even distance above the Earth's surface.

- (a) How far above the Earth's surface would it be?
- (b) What would this distance be if string were wrapped around Jupiter?
- (c) Develop a formula for the distance for any sphere, with any amount of extra string added.
- (d) Graph the relationship between the extra amount of string and the distance from the planet to the string.

