The Earth's Circumference

Assume that the earth is a perfect sphere 25,000 miles in circumference. A wire is stretched tightly around the equator, then cut so that another 100-foot long section of wire is added. If this new wire could be held an equal distance from the earth's surface at all points, could a person (a) get their finger under it, (b) step over it, (c) jump over it, or (d) walk under it? Explain.

Extension: What if the sphere's radius was X miles?

Extension: What if the shape was an ellipsoid? Rectangular box? (You need to determine appropriate analogues for circumference.)