Can you arrange each of these physical quantities in order of magnitude?
Be sure to justify your ordering with scientific and mathematical rigour.

The energy:

1. Used to walk up the steps of the Burk Dubai skyscraper (818m)
2. Contained in a full-sugar can of coke
3. Contained in a single atom of lead (according to Einstein's equation $E = mc^2$)
4. Needed to boil a kettle of tap water

The time taken:

1. For a radio wave to travel halfway around the world
2. For a top sprinter to run 1mm at top speed
3. For the end of the second hand on a watch to move a distance of 1 micron
4. For a test tube of hydrogen gas to fully combust when exposed to a flame

The distance:

1. You could jump vertically up on the surface of the moon
2. You could throw a tennis ball-sized lump of lead
3. Between peaks of two sound waves caused by two successive hand claps in your fastest possble round of applause
4. You can run in 1 second

The mass:

1. Of the atmosphere
2. Of all of the people in the world
3. Of the north polar ice cap
4. Of all of the living bacteria presently living on Earth

Some of the quantities are very precisely stated and will be possible to work out exactly. Others might be clearly stated, yet will defy an exact calculation. Others might not be clearly stated: you will need to state some more assumptions or do some research before a meaningful approximation might be made (be scientific about this process).