

The Problem of the Month

May 2021

Consider a roll of toilet paper where the radius of the hollow cardboard core is 1 inch. Suppose, further, that the radius of the full roll (the core together with all the toilet paper) is 2 inches. If we take the thickness of a single sheet of toilet paper to be $1/100$ of an inch, find the length of the entire roll if it were to be un-spooled. (You may take the thickness of the cardboard core to be zero.)

