The Forever Roll

Proctor and Gamble has recently introduced a new size of toilet paper roll and its huge.

Why would any person or family need such a big roll of toilet paper? Evidently families argue about people not changing the roll when it becomes empty and installing a new roll. This new size practically eliminates that problem.

We were able to find this data:

<table>
<thead>
<tr>
<th></th>
<th># sheets per roll</th>
<th>Roll diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charmin regular roll</td>
<td></td>
<td>4 inches</td>
</tr>
<tr>
<td>Charmin double roll</td>
<td>142 sheets per roll</td>
<td>4 inches</td>
</tr>
<tr>
<td>Charmin giant roll</td>
<td>200 2-ply sheets per roll</td>
<td>4 ¼ inches</td>
</tr>
<tr>
<td>Charmin Mega Roll</td>
<td>284 2-ply sheets per roll</td>
<td>5.25 inches</td>
</tr>
<tr>
<td>Charmin Super Mega roll</td>
<td>426 2-ply sheets per roll</td>
<td>5.5 inches</td>
</tr>
<tr>
<td>Charmin Single user Forever roll</td>
<td>850 2-ply sheets per roll</td>
<td>8.7 inches</td>
</tr>
<tr>
<td>Charmin multi user Forever roll</td>
<td>1,700 2-ply sheets per roll</td>
<td>12 inches</td>
</tr>
<tr>
<td>Charmin Forever roll XL</td>
<td></td>
<td>13.2 inches</td>
</tr>
</tbody>
</table>

1. What do you wonder about all of these sizes of rolls?

2. Is there a correlation between the number of 2-ply sheets in a roll and its diameter?

A single user Forever roll is supposed to last one person for a month. How long do you think;

a) A double roll will last?

b) A giant roll will last?

c) A mega roll will last?

Surely it must matter how much toilet paper you use, on average, daily? We found this information.

Consumers use approximately 8 - 9 sheets of paper per toilet use.

We use an average of 57 sheets of toilet paper a day!

These number seem high to us.

3. How much do you guess that you use daily? Do you think you use the average amount?
4. We couldn’t find any data on the size of a “regular roll”. Judging from the images and information above, how many sheets and what diameter would you expect a regular roll to measure?

Some fun facts:
- It takes about 384 trees to make the toilet paper that one man uses within his lifetime.
- About four billion people don’t use toilet paper. About 70% - 75% of the world’s population does not use toilet paper.
- People in some parts of the world do not use toilet paper due to a lack of trees.
- Toilet paper is often used for making dresses.
4. What comparison do you think is shown on the right?

Extension - How big of a roll would they need to make to last the average person an entire year? what would be the radius or diameter of that roll? the number of sheets?

Sources:  https://www.cnbc.com/2019/06/07/charmin-introduces-massive-forever-roll-targeted-at-millennials.html  
https://www.reddit.com/r/mildlyinteresting/comments/c8udcn/charmin_makes_a_toilet_paper_roll_that_lasted_one/  
http://www.toiletpaperhistory.net/toilet-paper-facts/toilet-paper-fun-facts/

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