



# How Much Toilet Paper Do You Need for a 2-Week Quarantine?

*Estimates may vary...*

The following estimates are ranked from least to most. I have done my best to standardize responses to reference a family of 4 (2 girls, 2 boys), and an assumption of 500 sheets per roll.

# 0.5 roll

## STUDENT ASSUMPTIONS:

1 roll=1000 pieces

Girls in family=3

Boys in family=3

Average pieces used by person per day=4

$4 \times 6 = 24$  pieces per day

$24 \times 14 = 336$  pieces over 2 weeks

## MY CALCULATIONS:

Avg. sheets per person per “go”: 4

Avg. “goes” per day: 1

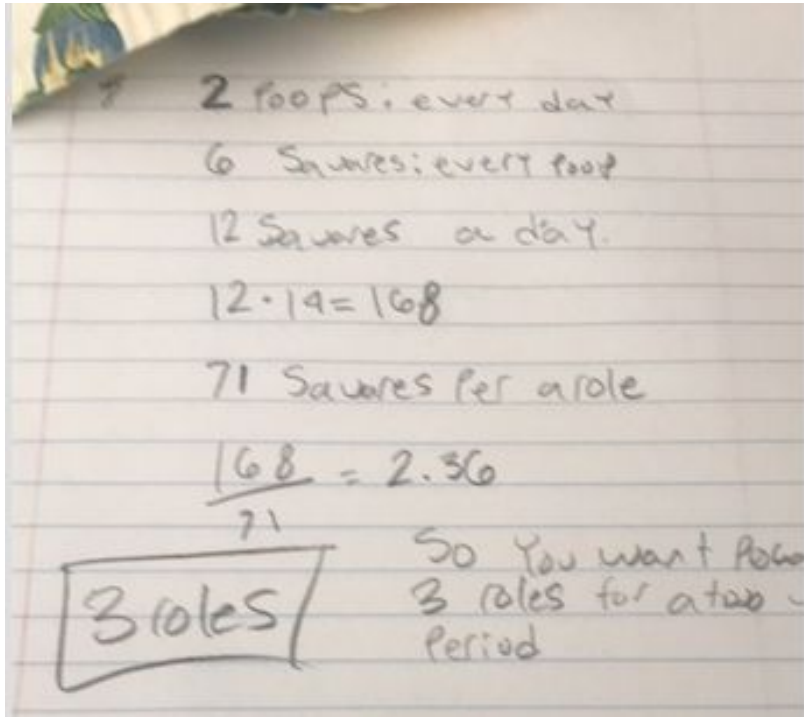
Times 4 people:  $4 * 1 * 4 = 16$

Times 14 days:  $16 * 14 = 224$

Divided by 500: 0.448

# 1 roll

## STUDENT ASSUMPTIONS:



## MY CALCULATIONS:

Avg. sheets per person per "go": 6

Avg. "goes" per day: 2

Times 4 people:  $6 * 2 * 4 = 48$

Times 14 days:  $48 * 14 = 672$

Divided by 500: 1.344

# 2 rolls

## STUDENT ASSUMPTIONS:

how much toilet paper is on a given roll? 70 squares

how much paper do you use per person per day?

$3(\text{squares}) * 7(\text{average times a person goes to the bathroom}) = 21 \text{ squares}$ , which is around  $\frac{1}{3}$  of the roll, probably less.

You will also need to consider how many people are in your family. An average amount of people in a family is 4

Does it matter if they are girls or boys? Yes, girls would probably use around 21 sheets, boys probably 8 sheets

## MY CALCULATIONS:

Avg. sheets per person per “go”: 3 for girls, 8 for boys

Avg. “goes” per day: 7 for girls, 1 for boys

Times 4 people:  $2(3*7) + 2(8*1) = 58$

Times 14 days:  $58 * 14 = 812$

Divided by 500: 1.624

# 2 rolls

## STUDENT ASSUMPTIONS:

total of people = 6  
Total no. of female = 3  
Total no. of male = 3  
male usage of paper sheets per day = 2  
female usage of paper sheets per day = 6  
toilet paper per day:  
 $(3 \times 2) + (3 \times 6)$   
 $6 + 18$   
 $= 24$   
one time usage of toilet paper = 8 pieces  
toilet paper per day:  
 $24 \times 8 = 192$  sheets  
total toilet paper sheets in 14 days  
 $192 \times 14 = 2688$   
one toilet paper = 326 sheets  
total toilet paper =  $\frac{2688}{326}$   
 $\downarrow$   
8.2  
9 toilet paper rolls

## MY CALCULATIONS:

Avg. sheets per person per “go”: 2  
for boys, 6 for girls

Avg. “goes” per day: 3

Times 4 people:  $2(2 \times 3 + 8) + 2(6 \times 3 + 8)$

Times 14 days:  $14(28 + 52) =$   
1,120

Divided by 500: 2.24

# 3 rolls

## STUDENT ASSUMPTIONS:

Male assumptions:

4 times a day

1 time using 18 squares

Female assumptions:

4 times a day

3 times using 7 squares (21)

1 time using 18 squares

My family: 3 girls, 1 guy

$$\begin{aligned} 1 \text{ day: } & 18 + (21 \times 3) + \\ & (18 \times 3) = 18 + 63 + \\ & 54 = 135 \end{aligned}$$

$$14 \text{ days} = 1890$$

Answer: 4 rolls of  
toilet paper

## MY CALCULATIONS:

Avg. sheets per person per “go”:  
(it’s complicated -- see student  
assumptions)

Avg. “goes” per day: (it’s  
complicated -- see student  
assumptions)

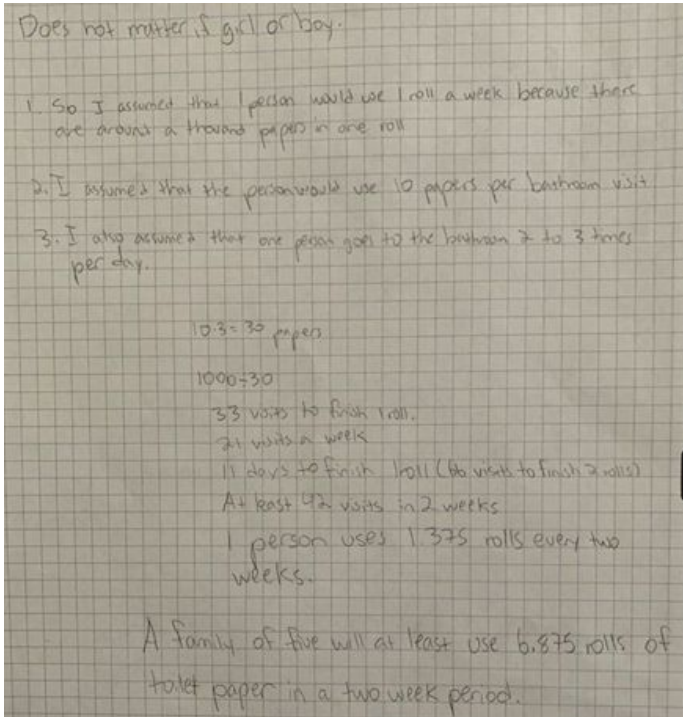
$$\text{Times 4 people: } 2(18) + 2(3 * 7 + 18) = 114$$

$$\text{Times 14 days: } 114 * 14 = 1,596$$

$$\text{Divided by 500: } 3.192$$

# 3 rolls

## STUDENT ASSUMPTIONS:



## MY CALCULATIONS:

Avg. sheets per person per “go”: 10

Avg. “goes” per day: 2.5

Times 4 people:  $10 * 2.5 * 4 = 100$

Times 14 days:  $180 * 14 = 1,400$

Divided by 500: 2.8



# 3 rolls

## STUDENT ASSUMPTIONS:

Amount of toilet paper on a role: 1,000

Average amount of toilet paper per day per person:

30

Total number of toilet paper per day: 120

Amount of toilet paper on a role over the amount used per day: 8.3333...

8.3333.. Is the number of days for one role to run out.

2 roles would be 16.6666... more than 14 days (2 weeks)

## MY CALCULATIONS:

Avg. sheets per person per “go”:  
???

Avg. “goes” per day: ???

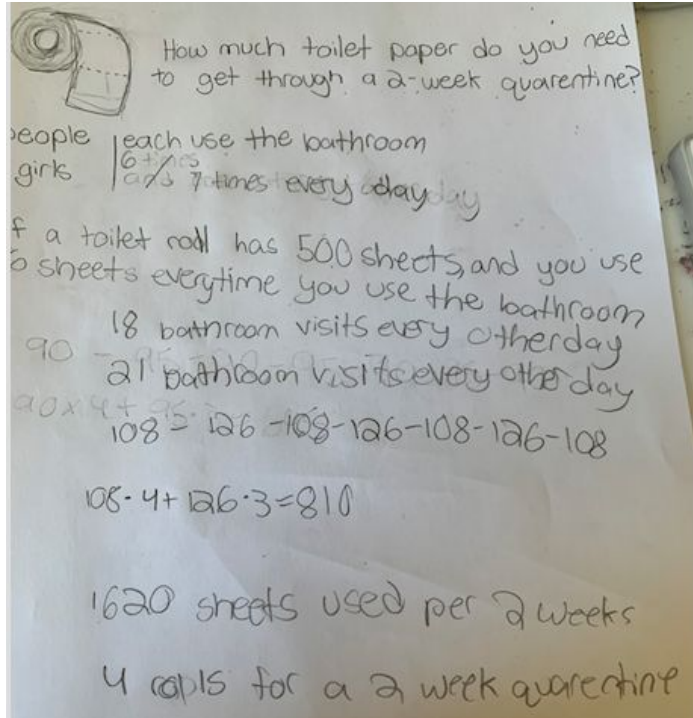
Times 4 people:  $30 * 4 = 120$

Times 14 days:  $120 * 14 = 1,680$

Divided by 500: 3.36

# 4 rolls

## STUDENT ASSUMPTIONS::



How much toilet paper do you need to get through a 2-week quarantine?

people | each use the bathroom  
girls |  $6\frac{1}{2}$  7 times every day

If a toilet roll has 500 sheets, and you use 6 sheets everytime you use the bathroom

18 bathroom visits every other day  
21 bathroom visits every other day

$90 - 108 = 126 - 108 - 126 - 108$

$108 - 4 + 126 \cdot 3 = 810$

1620 sheets used per 2 weeks

4 rolls for a 2 week quarantine

## MY CALCULATIONS:

Avg. sheets per person per "go": 6

Avg. "goes" per day: 6.5

Times 4 people:  $6 * 6.5 * 4 = 156$

Times 14 days:  $156 * 14 = 2,184$

Divided by 500: 4.368

# 5 rolls

## STUDENT ASSUMPTIONS:

Assumption: Everybody uses 30 'squares' of toilet paper per 'meeting'

Assumption: Everybody goes 1.5 times a day (That means 1 out of every 2 days, they go twice)

$1.5 * 14$  (two weeks) = 21

$30 * 21 * [\text{people in my household, in this case } 3] = 1890$

So either 2 1000-sheet rolls, or 4 500-sheet rolls

## MY CALCULATIONS:

Avg. sheets per person per "go": 30

Avg. "goes" per day: 1.5

Times 4 people:  $30 * 1.5 * 4 = 180$

Times 14 days:  $180 * 14 = 2,520$

Divided by 500: 5.04

# 11 rolls

## STUDENT ASSUMPTIONS:

1 roll per person per 5 days	
so 6 rolls for 5 days	
6 times 14	
84 rolls per 2 weeks	
6 = rolls of towelet paper	
14 = 2 weeks	

## MY CALCULATIONS:

Avg. sheets per person per “go”:  
???

Avg. “goes” per day: ???

Times 4 people:  $1 \text{ roll} * 4 = 4 \text{ rolls}$   
every 5 days

Times 14 days:  $14 / 5 * 4 = 11.2$   
rolls

Divided by 500: N/A