

Week 62 (11/17/03)

Leftover dental floss

Two rolls of dental floss initially have equal lengths, L . Each day, a person chooses one of the rolls at random and cuts off a fixed small length, d . This continues until one of the rolls runs out of floss. How much floss, on average, is left on the other roll at this time? Assume that $N \equiv L/d$ is very large, and ignore terms in your answer that are of subleading order in N .