

Problem of the Week-7: An Infinite Sum Related to the Fibonacci Sequence

Find the exact value of the sum

$$\sum_{n=2}^{\infty} \frac{f_n}{f_{n-1}f_{n+1}}$$

where f_n is the n th term of the Fibonacci sequence defined by $f_1 = f_2 = 1, f_{k+1} = f_k + f_{k-1}$

As always, show your work, fully explain and justify your answer.

Posting Date 4/11/14. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 4/25/14.