Series

Question

If we know that $\sum_{k=1}^{n} a_k = \dfrac{2n^2+5}{n^2+4}$, then which of the following must be true about $\sum_{n=1}^{\infty} a_n$?

A. It diverges, because $\lim_{n\to\infty} \frac{2n^2+5}{n^2+4} \neq 0$.

B. It converges to $\frac{5}{4}$.

C. It converges to 2.

D. It converges, but we can't know its exact value.

E. There is not enough information to determine whether or not it converges or diverges.