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   $\sum_{n=1}^{\infty} \frac{(-1)^n n^5}{n^5+1}$ can't apply AST use terms $\not\to$ 0!

4. What test, if any, for $\sum_{n=1}^{\infty} \frac{1}{2^n + 1}$?

   a) terms $\not\to 0$
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4. What test, if any, for $\sum_{n=1}^{\infty} \frac{1}{2^n+1}$?

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5. What is true about $\sum_{n=1}^{\infty} \frac{1}{n^2}$?

   a) ratio test will give $L < 1$
   b) integral test will show convergence
   c) both of the above
   d) none of the above

Test	useful	converges if	diverges if
Terms $\not\to 0$	$\sum a_n$, $a_n \not\to 0$ try this test first	inconclusive	$a_n \not\to 0$
Geometric	$\sum ax^n$, const x	$\lvert x\rvert<1$ to $\frac{a}{1-x}$	$\lvert x\rvert \geq 1$
Integral	pos, dec a_n known $\int$	$\int^\infty a_n dn$ converges $\int$ bounds $\sum$	$\int^\infty a_n dn$ diverges
Linearity	$\sum a_n + b_n$	both conv	only 1 div
Limit Comp	$0 < \lim\limits_{n\to\infty} \frac{a_n}{b_n} < \infty$ pos terms	$\sum b_n$ conv same behavior	$\sum b_n$ div
Ratio	$\lim_{n\to\infty} \frac{\lvert a_{n+1}\rvert}{\lvert a_n\rvert} \neq 1$	$L < 1$	$L > 1$
Alternating	alternating terms $\lvert a_n\rvert$ decreasing	$\lim_{n\to\infty} \lvert a_n\rvert = 0$	