asdf

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Limit Comparison Test (3.7.7)

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$$r = \lim\left(\frac{x_n}{y_n}\right)$$

then:

a) if $r \neq 0$

$\sum[x_n]$ is convergent $\iff$ $\sum[y_n]$ is convergent

b) if $r = 0$

$\sum[y_n]$ is convergent $\implies$ $\sum[x_n]$ is convergent

be careful, if $\sum[x_n]$ is convergent
$\sum[y_n]$ may or may not be convergent.

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