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$$\lim_{k \rightarrow +\infty} (\sqrt{k^2+3} - \sqrt{k^2-4})$$

$\infty - \infty$ is indeterminate
Multiply by the conjugate.

$$= \lim_{k \rightarrow \infty} (\sqrt{k^2+3} - \sqrt{k^2-4}) \frac{(\sqrt{k^2+3} + \sqrt{k^2-4})}{(\sqrt{k^2+3} + \sqrt{k^2-4})}$$

$$= \lim_{k \rightarrow +\infty} \frac{k^2+3 - (k^2-4)}{\sqrt{k^2+3} + \sqrt{k^2-4}}$$

$$= \lim_{k \rightarrow +\infty} \frac{7}{\sqrt{k^2+3} + \sqrt{k^2-4}} \rightarrow \frac{7}{+\infty} = 0$$

So the Divergence Test is inconclusive.