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# Corollary Alternating Series

Let  $b_1 \geq b_2 \geq \dots \geq b_n \rightarrow 0$

Then  $\sum_{j=1}^{\infty} (-1)^{j-1} b_j$  converges

Prf:  $A_n = \sum_{j=1}^n (-1)^{j-1} b_j$  is odd

Hence  $A_n = \sum_{j=1}^n (-1)^{j-1} b_j$

converges in  $\mathbb{R}$

$$0 \leq a_2 \leq a_4 \leq \dots$$

□