

$\frac{2}{7} - \frac{2}{8} + \frac{2}{9} - \frac{2}{10} + \frac{2}{11} - \dots = \sum_{n=1}^{\infty} (-1)^{n-1} \frac{2}{n+6}$. Now $b_n = \frac{2}{n+6} > 0$, $\{b_n\}$ is decreasing, and $\lim_{n \rightarrow \infty} b_n = 0$, so the series converges by the Alternating Series Test.