Decide whether the following series converge conditionally, converge absolutely, or diverge.

1. $\displaystyle\sum_{n=4}^{\infty}(-1)^{n+1}\frac{n}{n^2-1}$

2. $\displaystyle\sum_{j=0}^{\infty}(-1)^{j}\frac{e^j}{j!}$

3. $\displaystyle\sum_{k=1}^{\infty}(-1)^{k+1}\frac{2k+2}{k^2+2k}$