

6. [8 points] Determine whether the following series converges or diverges. If it converges, determine if it is absolute or conditional convergence. **Circle your final answer choice.** Fully justify your answer including using proper notation and showing mechanics of any tests you use.

$$\sum_{n=3}^{\infty} \frac{(-1)^n}{n^2 - 2}$$

Circle one: **Absolutely Converges** **Conditionally Converges** **Diverges**