방과후 퀴즈 11.5-11.6

6문제, 15분

2025.11.17.월

1. Write the theorem of **Alternating series, ratio test, root test**.
   Alternating series

   ratio test

   root test

2. Determine whether the series is absolutely convergent, conditionally convergent, or diverges.
$$\sum_{n=1}^{\infty} \frac{n \cos n\pi}{2^n}$$

3. Determine whether the series is absolutely convergent, conditionally convergent, or diverges.
$$\sum_{n=2}^{\infty} \frac{(-1)^n}{\sqrt{n} \ln n}$$

4. Determine whether the series is absolutely convergent, conditionally convergent, or diverges.

$$\sum_{n=1}^{\infty} \frac{\cos(n\pi/3)}{n!}$$

5. Determine whether the series is converges or diverges.

$$\sum_{n=1}^{\infty} ne^{-n}$$

6. Determine whether the series is converges or diverges.

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