

Show all work including Name of Tests. Only Answer is not enough.

If your answer shows, Series is CC, 1<sup>st</sup> show it is not AC]

Q1. Check if the series  $\sum_{k=1}^{\infty} \frac{(-1)^k \tan^{-1} k}{\sqrt{k}}$  is **Absolutely Convergent**, **Conditionally Convergent** or **Divergent**.

Q2. Find the Radius of Convergence and Interval of Convergence of the Power Series

$$\sum_{n=1}^{\infty} \frac{n!(2x+1)^n}{1.3.5\dots(2n-1)}$$

(Use other side of paper)

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Q1. Check if the series  $\sum_{k=1}^{\infty} \frac{(-1)^k \sqrt{k}}{k^2+k+1}$  is **Absolutely Convergent**, **Conditionally Convergent** or **Divergent**.

. Find the Radius of Convergence and Interval of Convergence of the Power Series  $\sum_{k=1}^{\infty} \frac{(-1)^k k!(3x-1)^n}{(2k-1)!}$ ,

(Use other side of paper)

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Q1. Check if the series  $\sum_{k=1}^{\infty} \frac{(-1)^k \tan^{-1} k}{\sqrt{k}}$  is **Absolutely Convergent**, **Conditionally Convergent** or **Divergent**.

$$\sum_{k=1}^{\infty} \frac{\sqrt{k} \cos k\pi}{k^{3/2} + 2k - 8}, \quad \boxed{\sum_{n=1}^{\infty} \frac{n!(2x+1)^n}{1.3.5...(2n-1)}}$$

$$\sum_{k=1}^{\infty} (-1)^k \frac{k!}{k^k}, \quad \boxed{\sum_{n=0}^{\infty} \frac{(-1)^n 2^{n-1} n x^n}{2^n (n^{3/2} + 1)}}$$

$$\sum_{k=1}^{\infty} \frac{(-1)^k k^2 (k!)}{(2k)!}, \quad \boxed{\sum_{n=1}^{\infty} \frac{(-1)^n n^2 (5x-4)^n}{n^{5/2} - 1}}$$

Q2. Find the Radius of Convergence and Interval of Convergence of the Power Series

$$\boxed{\sum_{n=1}^{\infty} \frac{(-1)^n 3^n (x+4)^n}{\sqrt{n!}}}$$

(Use other side of paper)

ID# \_\_\_\_\_ Name: \_\_\_\_\_

Quiz 6 MATH 102-T171

Serial# \_\_\_\_\_

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Q1. Check if the series  $\sum_{k=1}^{\infty} \frac{\sqrt{k} \cos k\pi}{k^{3/2} + 2k - 8}$  is **Absolutely Convergent, Conditionally Convergent** or **Divergent**.

Q2 Find the Radius of Convergence and Interval of Convergence of the Power Series

$$\sum_{n=1}^{\infty} \frac{(-1)^n 3^n (x+4)^n}{\sqrt{n!}}$$

(Use other side of the paper)

Show all work including Name of Tests. Only Answer is not enough.

If your answer shows, Series is CC, 1<sup>st</sup> show it is not AC]

Q1. Check if the series  $\sum_{k=1}^{\infty} (-1)^k \frac{k!}{k^k}$  is **Absolutely Convergent**, **Conditionally Convergent** or **Divergent**.

Q2 Find the Radius of Convergence and Interval of Convergence of the Power Series

$$\sum_{n=0}^{\infty} \frac{(-1)^n 2^{n-1} n x^n}{2^n (n^{3/2} + 1)}$$

(Use other side of the paper)

Show all work including Name of Tests. Only Answer is not enough.

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Q1. Check if the series  $\sum_{k=1}^{\infty} \frac{(-1)^k k^2 (k!)}{(2k)!}$  is **Absolutely Convergent, Conditionally Convergent** or **Divergent**.

,

Q2 Find the Radius of Convergence and Interval of Convergence of the Power Series

$$\sum_{n=1}^{\infty} \frac{(-1)^n n^2 (5x-4)^n}{n^{5/2}-1}$$

(Use other side of the paper)