

Math 199 CD3 Merit Worksheet 17: Radius of Convergence

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Find the radius of convergence for the following series

1.

$$\sum \frac{x^n}{(n^2 + 1)}$$

2.

$$\sum \frac{(x + 2)^n}{\sqrt{n}}$$

3.

$$\sum (-1)^n \frac{x^{2n+1}}{(2n + 1)!}$$

4.

$$\sum \frac{x_n}{n^n}$$

5.

$$\sum \frac{x^n}{(1+n^3)}$$

6.

$$\sum \frac{x^n}{n(\ln n)^2}$$

7.

$$\sum \frac{(n!)^2}{(2n)!} x^n$$