

5. [9 points] Consider the following power series:

$$\sum_{n=1}^{\infty} \frac{1}{n5^n} (x-4)^{n+1}$$

a. [4 points] Find the radius of convergence of the power series. Show all your work.

b. [5 points] For which values of x does the series converge absolutely? For which values of x does it converge conditionally?