

Radius of interval of convergence of the series

H-w: Find the radius of convergence and interval of convergence of the series:

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

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

$$3 - \sum_{n=1}^{\infty} \frac{(2x-1)^n}{5^n \sqrt{n}}$$

$$4 - \sum_{n=1}^{\infty} \frac{n}{2^n} (x-3)^n$$

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

$$6 - \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{n} (x-1)^n$$

$$7 - \sum_{n=1}^{\infty} \frac{4^n (x-3)^n}{n}$$

$$8 - \sum_{n=1}^{\infty} (x-3)^n$$

$$9 - \sum_{n=1}^{\infty} \frac{(3x+2)^n}{n^2}$$

$$10 - \sum_{n=1}^{\infty} \frac{1}{n 2^n} (x-3)^n$$