Math 132.5. Worksheet 3

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November 16, 2018

For each of the following power series, determine its interval of convergence.

(1)
$$\sum_{n=0}^{\infty} \frac{x^n}{4^{n+1}}$$

(2)
$$\sum_{n=0}^{\infty} nx^n$$

(3)
$$\sum_{n=0}^{\infty} \frac{x^n}{n!}$$

(4) S08Q2
$$\sum_{n=1}^{\infty} \frac{3^n(x-2)^n}{n}$$

(5)
$$\sum_{n=1}^{\infty} (-1)^n \frac{x^n}{n^2 7^n}$$

(6) S06Q6a
$$\sum_{n=1}^{\infty} \frac{(x-1)^n}{\sqrt{n} \cdot 2^n}$$

(7)

$$\sum_{n=0}^{\infty} n!(2x-1)^n$$

(8)

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

(9)

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

(10)

$$\sum_{n=2}^{\infty} \frac{x^n}{\ln n}$$