

Problems - 9.2 continued

(1) Show whether the following series is absolutely convergent, conditionally convergent or divergent.

$$\sum_{n=1}^{\infty} \frac{(-1)^{n-1} 10^n}{n!}$$

(2) Show whether the following series is absolutely convergent, conditionally convergent or divergent.

$$\sum_{n=1}^{\infty} \frac{(-1)^{n-1} n!}{10^n}$$

(5) Show whether the following series is absolutely convergent, conditionally convergent or divergent.

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

(16) Show whether the following series is absolutely convergent, conditionally convergent or divergent.

$$\sum_{n=1}^{\infty} \left(\frac{n}{2n+1} \right)^n$$

(17) Find all values of x for which the power series converges.

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

(20) Find all values of x for which the power series converges.

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

(29a) Find c_n so that the series

$$\sum_{n=1}^{\infty} c_n x^n$$

only converges for $x = 0$.

(29a) Find c_n so that the series

$$\sum_{n=1}^{\infty} c_n x^n$$

converges for all values of x .