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4. For the series below, **(a)** find the series' radius and interval of convergence. For what values of x does the series converge **(b)** absolutely, **(c)** conditionally?

$$\sum_{n=1}^{\infty} \frac{x^n}{n\sqrt{n}\,11^n}$$

(a) The radius of convergence is 11.
(Type an integer or a fraction.)

Determine the interval of convergence. Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** The interval of convergence is $-11 \le x \le 11$.
  (Type a compound inequality. Use integers or fractions for any numbers in the expression.)
- **B.** The series converges only at x = . (Type an integer or a fraction.)
- **C.** The series converges for all values of x.

(b) For what values of x does the series converge absolutely?

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** The series converges absolutely for $-11 \le x \le 11$.
  (Type a compound inequality. Use integers or fractions for any numbers in the expression.)
- **B.** The series converges absolutely at x = . (Type an integer or a fraction.)
- **C.** The series converges absolutely for all values of x.

(c) For what values of x does the series converge conditionally?

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** The series converges conditionally for .
  (Type a compound inequality. Use integers or fractions for any numbers in the expression.)
- **B.** The series converges conditionally at x = .
  (Type an integer or a fraction. Use a comma to separate answers as needed.)
- **C.** There is no value of x for which the series converges conditionally.