Web**Assign**

Hw 24 (11.6): Absolute Conv., Ratio and Root Tests (Homework)

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MA 162 Spring 2012, section 321, Spring 2012

Instructor: Jonathan Montano

Current Score : 20 / 20 **Due :** Thursday, March 22 2012 11:55 PM EDT

1. 2.22/2.22 points | Previous Answers

SCalcET7 11.6.003.

Determine whether the series is absolutely convergent, conditionally convergent, or divergent.



- absolutely convergent
- conditionally convergent
- divergent

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2. 2.22/2.22 points | Previous Answers

SCalcET7 11.6.005.

Determine whether the series is absolutely convergent, conditionally convergent, or divergent.

$$\sum_{n=0}^{\infty} \frac{(-1)^n}{5n+1}$$

- absolutely convergent
- conditionally convergent
- divergent

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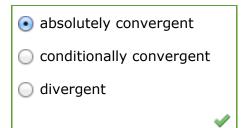
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3. 2.22/2.22 points | Previous Answers

SCalcET7 11.6.007.MI.

Determine whether the series is absolutely convergent, conditionally convergent, or divergent.

$$\sum_{k=1}^{\infty} k \left(\frac{3}{7}\right)^k$$



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4. 2.22/2.22 points | Previous Answers

SCalcET7 11.6.008.MI.

Determine whether the series is absolutely convergent, conditionally convergent, or divergent.

$$\sum_{n=1}^{\infty} \frac{n!}{104^n}$$

- absolutely convergent
- conditionally convergent
- divergent

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5. 2.22/2.22 points | Previous Answers

SCalcET7 11.6.013.

Determine whether the series is absolutely convergent, conditionally convergent, or divergent.

$$\sum_{n=1}^{\infty} \frac{15^n}{(n+1)5^{2n+1}}$$

- absolutely convergent
- conditionally convergent
- divergent

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6. 2.22/2.22 points | Previous Answers

SCalcET7 11.6.017.

Determine whether the series is absolutely convergent, conditionally convergent, or divergent.

$$\sum_{n=2}^{\infty} \frac{(-1)^n}{\ln 6n}$$

- absolutely convergent
- conditionally convergent
- divergent

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7. 2.22/2.22 points | Previous Answers

SCalcET7 11.6.019.

Determine whether the series is absolutely convergent, conditionally convergent, or divergent.

$$\sum_{n=1}^{\infty} \frac{\cos(n\pi/9)}{n!}$$

- absolutely convergent
- conditionally convergent
- divergent

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8. 2.22/2.22 points | Previous Answers

SCalcET7 11.6.031.

The terms of a series are defined recursively by the equations

$$a_1 = 7$$
 $a_{n+1} = \frac{7n+1}{4n+11} \cdot a_n$.

Determine whether $\sum a_n$ is absolutely convergent, conditionally convergent, or divergent.

- absolutely convergent
- conditionally convergent
- divergent

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9. 2.24/2.24 points | Previous Answers

SCalcET7 11.6.035.

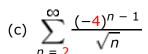
Determine whether the Ratio Test is inconclusive (that is, it fails to give a definite answer), conclusive (convergent), or conclusive (divergent) for each series.

(a)
$$\sum_{n=3}^{\infty} \frac{5}{n^3}$$

- inconclusive
- conclusive (convergent)
- conclusive (divergent)

(b)
$$\sum_{n=2}^{\infty} \frac{n}{7^n}$$

- inconclusive
- conclusive (convergent)
- conclusive (divergent)



- inconclusive
- conclusive (convergent)
- conclusive (divergent)

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

- inconclusive
- conclusive (convergent)
- conclusive (divergent)

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