WebAssign
Hw 23 (11.5): Alternating Series (Homework)

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MA 162 Spring 2012, section 321, Spring 2012
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Current Score : 20 / 20 **Due :** Tuesday, March 20 2012 11:55 PM EDT

1. 2.85/2.85 points | Previous Answers SCalcET7 11.5.002.MI.

Test the series for convergence or divergence.

$$\frac{3}{4} - \frac{3}{6} + \frac{3}{8} - \frac{3}{10} + \frac{3}{12} - \cdots$$

- (•) converges
- ( ) diverges

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2. 2.85/2.85 points | Previous Answers SCalcET7 11.5.004.

Test the series for convergence or divergence.

$$\sum_{n=1}^{\infty} (-1)^{n-1} b_n = \frac{1}{\sqrt{4}} - \frac{1}{\sqrt{5}} + \frac{1}{\sqrt{6}} - \frac{1}{\sqrt{7}} + \frac{1}{\sqrt{8}} - \cdots$$

- (•) converges
- ( ) diverges

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3. 2.85/2.85 points | Previous Answers SCalcET7 11.5.005.

Test the series for convergence or divergence.

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

- (•) converges
- ( ) diverges

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4. 2.85/2.85 points | Previous Answers SCalcET7 11.5.008.

Test the series for convergence or divergence.

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

- (•) converges
- ( ) diverges

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5. 2.85/2.85 points | Previous Answers SCalcET7 11.5.011.

Test the series for convergence or divergence.

$$\sum_{n=1}^{\infty} (-1)^{n+1} \frac{n^2}{n^3 + 8}$$

- (•) converges
- ( ) diverges

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6. 2.85/2.85 points | Previous Answers SCalcET7 11.5.013.

Test the series for convergence or divergence.

$$\sum_{n=1}^{\infty} (-1)^{n-1} e^{7/n}$$

- ( ) converges
- (•) diverges

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7. 2.9/2.9 points | Previous Answers SCalcET7 11.5.023.

Test the series for convergence or divergence.

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

- (•) converges ✓
- ( ) diverges

If the series is convergent, use the Alternating Series Estimation Theorem to determine how many terms we need to add in order to find the sum with an error less than 0.00005. (If the quantity diverges, enter DIVERGES.)

5 ✓ terms

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