

**Fall 2012**

6. The interval of convergence of the series  $\sum_{n=1}^{\infty} \frac{(-1)^n}{n} (x-7)^n$  is:

- (a)  $[6, 8]$     (b)  $(6, 8]$     (c)  $x = 5$     (d)  $(6, 8)$     (e) diverges    (f)  $(-1, 1)$

**Spring 2012**

3. Find the interval of convergence of

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

A)  $\left(\frac{-1}{3}, \frac{5}{3}\right]$

B)  $\left[\frac{-1}{3}, \frac{5}{3}\right)$

C)  $\left(\frac{-1}{3}, \frac{5}{3}\right)$

D)  $\left[\frac{-1}{3}, \frac{5}{3}\right]$

E)  $\left(\frac{1}{3}, 1\right]$

F)  $\left[\frac{1}{3}, 1\right)$

**Fall 2011**

6. Find the interval of convergence of the power series  $\sum_{n=1}^{\infty} \frac{(5x - 3)^n}{n^2}$ .

- (A)  $(-1, 1)$  (B)  $[-1, 1]$  (C)  $[1, \frac{4}{5})$  (D)  $[-\frac{4}{5}, \frac{4}{5}]$  (E)  $[-\frac{4}{5}, \frac{4}{5})$  (F)  $[\frac{2}{5}, \frac{4}{5}]$  (G)  $[0, 1]$  (H)  $\{0\}$

**Spring 2011**

16. The series  $\sum_{n=1}^{\infty} \frac{(-1)^n}{n} 2^{n-1} x^n$  is convergent precisely for the following values of  $x$ :

- (a)  $-\frac{1}{2} < x \leq \frac{1}{2}$    (b)  $0 \leq x < 4$    (c)  $x \in \{-2, 2\}$    (d)  $-2 < x \leq 2$    (e)  $x = \pi$    (f)  $x < 5$

**Fall 2010**

12. Find the interval of convergence of the power series

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

(A)  $[-1, 3]$ (B)  $[-1, 3)$ (C)  $(-1, 3]$ (D)  $(-1, 3)$ (E)  $[1/2, 3/2]$ (F)  $[1/2, 3/2)$ (G)  $(1/2, 3/2]$ (H)  $(1/2, 3/2)$ 

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Math 104 - Rimmer

Name \_\_\_\_\_

Hand in Hw # 12

Recitation Number \_\_\_\_\_

**ANSWERS:**

**Fall 2012 # 6: B**

**Spring 2012 # 3: D**

**Fall 2011 # 6: F**

**Spring 2011 # 16: A**

**Fall 2010 # 12: B**