

Name: _____

Section: _____

Math 10560, Quiz 9

April 11, 2017

- The Honor Code is in effect for this quiz. All work is to be your own.
- Please turn off all cellphones and electronic devices.
- Calculators are NOT allowed
- The quiz lasts for 10 min.

PLEASE MARK YOUR ANSWERS WITH AN X, not a circle!

1. (a) (b) (c) (d) (e)

2. (a) (b) (c) (d) (e)

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Multiple Choice

1.(2 pts.) One of the statements below holds for the series $\sum_{n=1}^{\infty} \frac{\sin(n) + \cos(n)}{n^2 + 1}$. Which one?

- (a) This series converges by Alternating Series Test.
- (b) This series diverges because $\lim_{n \rightarrow \infty} \frac{\sin(n) + \cos(n)}{n^2 + 1}$ is not 0.
- (c) This series is conditionally convergent.
- (d) This series is absolutely convergent by Comparison Test.
- (e) This series diverges by Ratio Test.

2.(2 pts.) Compute the radius of convergence of the power series $\sum_{n=1}^{\infty} 3^n(x-1)^n$.

- | | | |
|------------------------------|------------------|-----------------------|
| (a) $R = \frac{\sqrt{3}}{2}$ | (b) $R = 0$ | (c) $R = \frac{1}{3}$ |
| (d) $R = 3$ | (e) $R = \infty$ | |