BC Calculus Quiz

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Plot the sequence of partial sums, S1, S2, S3, S4, and S5 for each of the two series below.
2. $ \sum\_{n=1}^{\infty }\frac{1}{n!}$
3. $\sum\_{n=1}^{\infty }\frac{2^{n}}{\sqrt{n!}}$
4. Write out the first 5 terms for each series below. That is, find a1, a2, a3, a4, and a5.
5. $\sum\_{n=1}^{\infty }\frac{\cos((πn))}{n^{2}+1}$
6. $\sum\_{n=1}^{\infty }\frac{\sin((\left(2n-1\right)π))}{\sqrt{n}}$
7. $\sum\_{n=1}^{\infty }\frac{\left(-1\right)^{n+1}}{3n}$
8. $\sum\_{n=2}^{\infty }\frac{\sqrt[n]{n}}{ln⁡(n)}$
9. $\sum\_{n=1}^{\infty }\frac{1}{\sqrt[n]{n^{2}}}$
10. For all seven (7) series above, write if they are convergent, absolutely convergent, conditionally convergent, or divergent. Remember, only alternating series are described as either absolutely convergent or conditionally convergent.

1a)

1b)

2a)

2b)

2c)

2d)

2e)