NAME:

MATH 133 - Michigan State University
October 24th, 2017.

Quiz 7

Clear your desk of everything except pens, pencils and erasers. **Show all your work.**
If you have a question raise your hand and I will come to you.

1. [7 pts.] Consider the sequence:

$$\sum_{n=1}^{\infty} \frac{n}{n^2+2}.$$

a). [2 pts.] What are the conclusions, if any, of the Divergence Test, for the series above?

b). [2 pts.] Apply either the Comparison Test or the Limit Comparison Test to make a conclusion about the convergence or divergence of the series above.

c). [3 pts.] Apply the Integral Test to make a conclusion about the convergence or divergence of the series above.

2. [3 pts.] Determine whether or not the series below converges, and if so, find its sum.

$$\sum_{n=1}^{\infty} \big(\cos(19)\big)^n$$