

FERPA RELEASE: Because of privacy concerns, we are not allowed to return your graded homework in lecture without your permission. If you wish us to return your homework in lecture, please sign on the line indicated below. Otherwise, you will have to pick your homework up in your instructor's office.

SIGN HERE: _____.

Problem	Points	Score
1	4	
2	4	
3	4	
Total	12	

1. (4) Find the interval of convergence for the power series $\sum_{n=0}^{\infty} \frac{(-4x + 2)^n}{n^4}$.

2. (4) Find a power series centered at $a = 0$ for the function $f(x) = x^2 \arctan(3x^3)$.

3. (4) Derive a Taylor series centered at $a = 0$ for the integral $\int_0^x \frac{\sin t}{t} dt$.

Note: This function's antiderivative cannot be expressed in terms of elementary functions, so don't try to do the integral first!