

Here is a fairly random collection of review problems to start the term.

1. Compute some integrals:

a. $\int \frac{x^3 + 3x + 1}{x} dx$

b. $\int (e^x + \cos x + \sin x) dx$

c. $\int x^2 \sin(x^3 + 4) dx$

d. $\int \frac{1}{5 - 2y} dy$

e. $\int x^2 \ln x dx$

2. Find a function that if we take its fourth derivative, we get 16 times the original function.

3. Solve for x : $6x^2 + 13x = 5$.

4. Find the radius of convergence: $\sum_{n=0}^{\infty} \frac{x^n}{3^n}$