Answer all questions and show all work. Questions 1 – 6 are worth 2 points each, and question 7 is worth 3 points.

For questions 1 – 4, find the integral.

1. 

1. 

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= + C \* the answer according to the graphing calculator is positive, but I’m getting a negative answer.

1. 

* The correct answer according to the calculator is –[; I don’t know where I’m going wrong.

4. 

=

=

=

1. Evaluate  = 1

* I don’t know how to show work for this one.

6. Use the ratio test to find the interval of convergence of the power series…

7.

(a) The region bounded by the parabola y = 4x – x2 and the x-axis is revolved around the x- axis. Find the volume of the resulting solid.

(b) If the equation of the parabola in part (a) were changed to y = 4 – x2, would the volume of the solid be different? Explain.