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| Assessment 6Dusty Wilson Math 163 No work = no credit **No CAS Calculators** | | **Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *[Mathematics] is a kind of public language that allows us, as best we can, to try to achieve objectivity and certainty.* Javier Leach 1942 - 2016 (Spanish mathematician, theologian, priest) | | | |
| Warm-ups (1 pt each): | =\_\_\_\_\_ | | =\_\_\_\_\_ | [[1]](#footnote-1)= |

(1 pt) The quote by Leach (above) is from the author of a recent reading. What does Leach mean when he calls math a “public language?” Answer using complete English sentences.

(8 pts) Consider .

1. Find the Taylor Series for  centered at 
2. Notice that . Use  to estimate 4.
3. What is the error in the estimate in (b.). (Hint: The answer is between 1 and 2).[[2]](#footnote-2)

(8 pts) Find the MacLaurin series for 

(8 pts) Find the radius of convergence of the power series 

1. What is the MacLaurin series for cosine? [↑](#footnote-ref-1)
2. This series converges very slowly. For context, tt takes 12 terms for  to be within 0.01 of 4. [↑](#footnote-ref-2)