**Harold’s Taylor Series**

**Cheat Sheet**

21 April 2024

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| **Power Series** |  |
| **Power Series About Zero**  Geometric Series if |  |
| **Power Series** |  |

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| **Approximation Polynomial** |  |
| [https://upload.wikimedia.org/wikipedia/commons/thumb/e/e4/Sintay_SVG.svg/300px-Sintay_SVG.svg.png](https://en.wikipedia.org/wiki/Taylor_series) |  |

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| **Maclaurin Series** |  |
| **Maclaurin Series**  Taylor Series centered about |  |
| **Maclaurin Series Remainder** | where and |

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| **Taylor Series** |  |
| **Taylor Series**  Maclaurin Series if |  |
| **Taylor Series Remainder** | where and |
| **Summation Form** | **Expanded Form** |
| **Exponential Functions** |  |
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| **Natural Logarithms** |  |
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| **Geometric Series** |  |
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| Double Factorial (!!) |  |
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| **Binomial Series** |  |
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| **Trigonometric Functions** |  |
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| **Inverse Trigonometric Functions** |  |
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| **Hyperbolic Functions** |  |
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| **Inverse Hyperbolic Functions** |  |
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| **Bernoulli Numbers** | **Euler Numbers** | **Gamma Function** |
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| **Generating Function** |  |  |
|  |  |  |
| **Recursive Definition** | **Iterated Sum** | **Recursive Definition** |
|  |  |  |

**Sources**:

* <https://www.wolframalpha.com>
* <https://en.wikipedia.org>
* <http://ddmf.msr-inria.inria.fr/1.9.1/ddmf>
* <http://web.mit.edu/kenta/www/three/taylor.html>