

MaClaurin Series

For each Geometric function given do the following:

- a. Write the first 4 terms
- b. Write the rule for the series
- c. Find the interval of convergence
- d. Take the derivative of the function and series.
- e. Take the antiderivative of the **function and the series**.

1. $f(x) = \frac{x}{1-x^2}$

2. $f(x) = \frac{x^3}{1+x^4}$

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1. $f(x) = \ln(1 + x^3)$

2. $f(x) = \ln(1 - x^2)$

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1. $f(x) = xe^{x^2}$

2. $f(x) = x^4e^{x^5}$

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1. $f(x) = \tan^{-1}(x^5)$

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