MTH101: Tutorial 5

Dr. Tai-Jun Chen, Dr. Xinyao Yang

Xi'an Jiaotong-Liverpool University, Suzhou

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Example 1.1

Write the **Taylor Series** *with center* $z_0 = 7$ *of the Function*

$$f(z) = \frac{1}{4 - z},$$

and find its **Radius of Convergence.**

Example 1.2

Write the **Taylor Series** *with center* $z_0 = 0$ *of the function*

$$f(z) = \frac{z}{(1+z)^3},$$

and find its **Radius of Convergence.**

Example 2.1

Write the function

$$f(z) = \frac{2}{z^5} e^{\frac{3}{z}},$$

in power series with center $z_0 = 0$.

Exercise 2.2

Write all the **Power Series** *with center* $z_0 = 0$ *of the function*

$$f(z) = \frac{3}{32z^4 + 2}.$$

Exercise 2.3

Write all the **Power Series** *with center* $z_0 = 1$ *of the function*

$$f(z) = 1/z.$$