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CALCULUS FOR ENGINEERS
MATH 1110

Tutorial No. 8 Solution

Power Series

Find the Taylor series of the following problems:

1. $f(x) = \ln x, \quad a = 1$

2. $f(x) = \ln(1 + x), \quad a = 0$

3. $f(x) = 1/x, \quad a = 2$

4. $f(x) = 1/(x + 2), \quad a = 0$

Find the Maclaurin series of the following problems:

5- e^x

6- $e^{x/2}$

7- $\frac{1}{1+x}$

8- $\frac{1}{1-x}$

9- $\sin 3x$

10- $\sin \frac{x}{2}$