Calculus with Analytic Geometry II

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June 13, 2025

1 Taylor Polynomial Worksheet

Find the nth taylor polynomial for each of the following functions:

I. $\sin(x)$, centered at $x_0 = \frac{\pi}{4}$,

II. $\sin(x)$, centered at $x_0 = 0$,

III. $\ln(x)$, centered at $x_0 = 1$.

Use the appropriate Taylor polynomial to approximate the following values to at least 2-decimal places:

a. $\sin(0.5)$

b. $\ln(2)$

c. $\sin(1)$