

Name _____ Score _____ Teacher _____ Date _____

Taylor and Maclaurin Polynomials

Build each requested polynomial from exact derivative coefficients. Show the center and keep factorial coefficients exact.

1. Find the Taylor polynomial through order 5 for $f(x)=\ln(x)$ centered at $a = 1$.

2. Find the Taylor polynomial through order 5 for $f(x)=\sin(x)$ centered at $a = 0$.

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Build each requested polynomial from exact derivative coefficients. Show the center and keep factorial coefficients exact.

3. Find the Taylor polynomial through order 5 for $f(x)=1/x$ centered at $a = 1$.

4. Find the Taylor polynomial through order 5 for $f(x)=e^x$ centered at $a = 0$.

Math Sheet

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Taylor and Maclaurin Polynomials

Build each requested polynomial from exact derivative coefficients. Show the center and keep factorial coefficients exact.

5. Find the Taylor polynomial through order 4 for $f(x)=\cos(x)$ centered at $a = 0$.

6. Find the Taylor polynomial through order 4 for $f(x)=e^x$ centered at $a = 1$.
