

## TAYLOR SERIES

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Find the Taylor series expansion for the function centered at  $a$ .

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

**2.**  $f(x) = \ln \left( \frac{1+x}{1-x} \right)$

3.  $f(x) = \frac{1}{x}, a = 1$

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