Computing the Nth Taylor Polynomial $T_{N(x)} = \sum_{n=0}^{N} \frac{f^{(n)}(a)(x-a)^n}{n!}$

$$T_N(x) = f^{(0)}(a) + \frac{f^{(1)}(a)(x-a)}{1!} + \frac{f^{(2)}(a)(x-a)^2}{2!} + \frac{f^{(3)}(a)(x-a)^3}{3!} + \frac{f^{(4)}(a)(x-a)^4}{4!} + \frac{f^{(5)}(a)(x-a)^5}{5!} + \cdots + \frac{f^{(N)}(a)(x-a)^N}{N!}$$

$$= \square + \frac{\square(x-\square)}{1!} + \frac{\square(x-\square)^2}{2!} + \frac{\square(x-\square)^3}{3!} + \frac{\square(x-\square)^4}{4!} + \frac{\square(x-\square)^5}{5!} + \cdots + \frac{\square(x-\square)^N}{N!}$$

Compute $f^{(n)}(x)$	Evaluate $f^{(n)}(a)$
$f^{(0)}(x) =$	$f^{(0)}(a) =$
$f^{(1)}(x) =$	$f^{(1)}(a) =$
$f^{(2)}(x) =$	$f^{(2)}(a) =$
$f^{(3)}(x) =$	$f^{(3)}(a) =$
$f^{(4)}(x) =$	$f^{(4)}(a) =$

Compute $f^{(n)}(x)$	Evaluate $f^{(n)}(a)$
$f^{(5)}(x) =$	$f^{(5)}(a) =$
$f^{(6)}(x) =$	$f^{(6)}(a) =$
$f^{(7)}(x) =$	$f^{(7)}(a) =$
$f^{(8)}(x) =$	$f^{(8)}(a) =$
$f^{(9)}(x) =$	$f^{(9)}(a) =$

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