

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

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

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

Compute $f^{(n)}(x)$

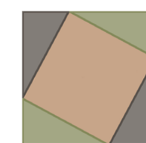
Evaluate $f^{(n)}(a)$

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

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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