

Re: What is the derived function for  $f(x) = k / ((1+x/12)^n)$

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- *From:* Virgil <virgil@xxxxxxxxxxx>
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In article <1160548554.523187.207550@xx>, gert@xxxxxxxxxxx wrote:

Hi, it has been a while since I done some differentiation and a little help would be appreciated.

The function is  $f(x) = k / ((1+x/12)^n)$   
Where  $k$  is a constant value and  $n = 0 \rightarrow \text{infinity}$

What is the derived function for  $f(x)$ :  
 $f'(x) = -n * k * (1+x/12)^{-n-1}$

The chain rule requires that you multiply by the derivative of  $1 + x/12$ .

$$\begin{aligned} f'(x) &= -n * k * (1+x/12)^{-n-1} * (1/12) \\ &= -n * k / (12 * (1+x/12)^{n+1}) \end{aligned}$$

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