KeTTask01-1

1 Q01-3 [2] Find the cubic approximation of f(x) at x=0.

$Q01$ *Let* $f(x) = \log(1+x)$. *Answer the questions.*

- $[2]$ *Find the cubic approximation of* $f(x)$ *at* $x = 0$.
- $[2] = x - \frac{1}{2}x^2 + \frac{1}{3}x^3$

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2 [2]=x-fr(1,2)x^(2)+fr(1,3)x^(3)

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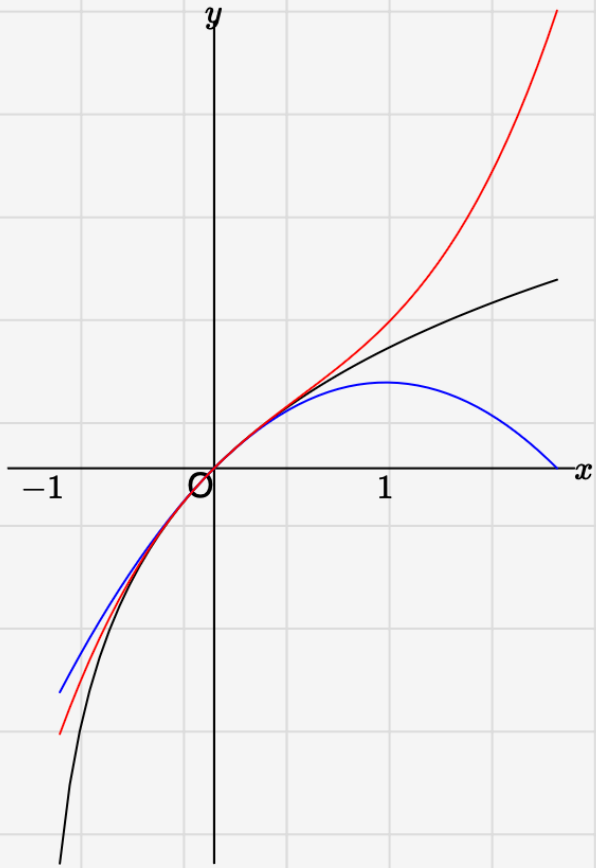
1;;12024120526907;;Q01---;;[1]=x-fr(1,2)x^(2);;[2]=x-fr



$$f(x) = \sum_{n=0}^{\infty} \frac{f^{(n)}(0)}{n!}x^n$$

$$= f(0) + f'(0)x + \frac{f''(0)}{2!}x^2 + \frac{f^{(3)}(0)}{3!}x^3 + \cdots$$