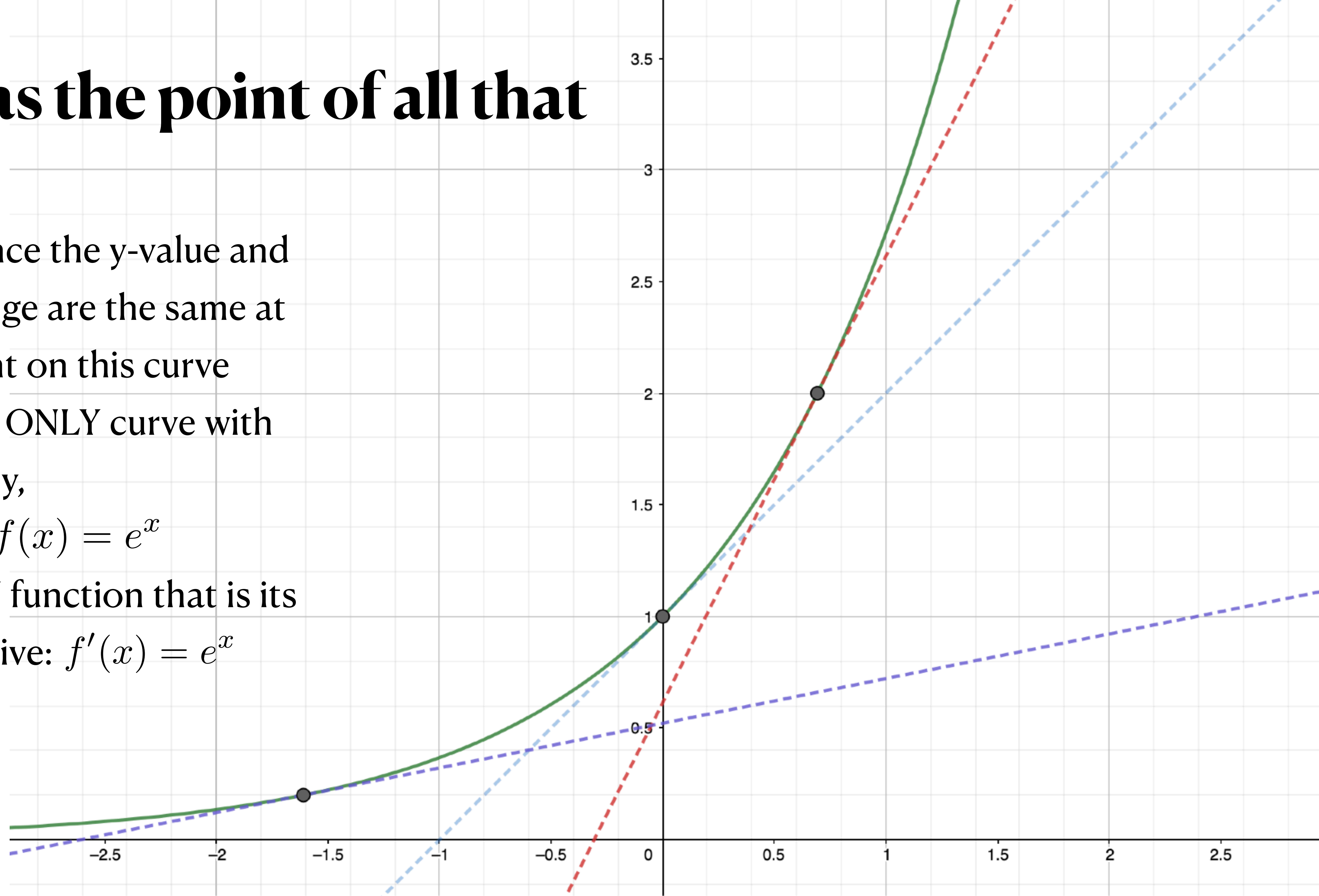


what was the point of all that

just that, since the y-value and
rate of change are the same at
EVERY point on this curve
and it is the ONLY curve with
this property,
this means $f(x) = e^x$
is the ONLY function that is its
own derivative: $f'(x) = e^x$



fine, but what is "e" actually

like π , it's just a very particular number that was significant enough to give it a name

i went through all that stuff about the graph because it was
one of the easier ways to explain why it's significant

the actual number is about 2.71828... but also like π , the decimal
representation goes on forever without settling down into any
kind of repeating pattern (which is why it needs a name!)

it's also this (warning more calculus): $\lim_{n \rightarrow \infty} \left(1 + \frac{1}{n}\right)^n = e$

which basically means if you invest \$1 at 100% interest and that interest is compounded at every possible infinitesimal time increment then you will have \$e at the end of the year! but i don't like that explanation as much because it has recourse to crass notions of "money" and "interest" and i want this presentation to be PURE MATH, BABEY