A quick note on business calculus

“Calculation of π by definite integral”

You can also calculate π , which everyone knows well, using definite integrals!

$\pi = 3.14159\ 26535\ 89793\ 23846\ 26433\ 83279\ 50288$

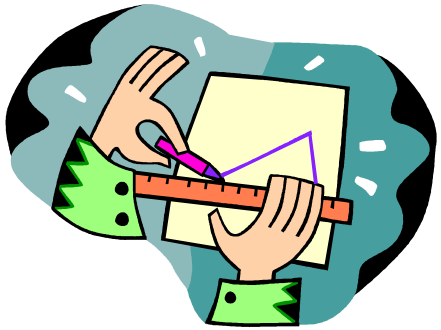
$\int_0^1 \frac{1}{x^2+1}\,dx = \frac{\pi}{4}$ --> $\pi = 4\int_0^1 \frac{1}{x^2+1}\,dx$ you can calculate π using this .

I tried calculating a definite integral using Simpson's rule with three different numbers of subintervals 10,50 and 100.
If the number of subintervals is set to 100,the calculation can be done accurately up to 14 decimal places.
If you increase the number of digits, you can calculate with even higher accuracy.

function f(x)=	2.209944751	=4*/(1/(c5^2+1))
variable x=	0.9	
Lower limit=	0.0	
Upper limit=	1.0	
intervals=	10	
A:result=	3.14159265296979	
B:π=	3.14159265358979	
Error(A-B)= -	0.00000000062001	Error at the 10th decimal place

function f(x)=	2.040399918	=4*/(1/(c5^2+1))
variable x=	0.98	
Lower limit=	0.0	
Upper limit=	1.0	
intervals=	50	
A:result=	3.14159265358975	
B:π=	3.14159265358979	
Error(A-B)= -	0.00000000000004	Error at the 14th decimal place

function f(x)=	2.020099995	=4*/(1/(c5^2+1))
variable x=	0.99	
Lower limit=	0.0	
Upper limit=	1.0	
intervals=	100	
A:result=	3.14159265358979	
B:π=	3.14159265358979	
Error(A-B)=	-	No error



If you take a large number of digits, you can calculate even more accurately!