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Thread: [Need To Use Python To Make A Calculator For IVT](#)

Linxy - May 26, 2017, 4:57 pm

Code # QUICK OVERVIEW

One = means I'm defining something Ex. $a = 2$ means I'm defining a to be equal to 2.
Two ='s means I'm comparing something Ex $2 == 2$ means I'm seeing if 2 is equal to 2.
Two *'s means I'm going to the power of some number. Ex. $3 ** 6$ is 3^6 .

MRW I'm In Calculus
<https://i.imgur.com/q2MP6O0.gifv>

Lines 10 - 21 is the equivalent of adding 14px periods to your paper.
answer = input("Do you know what IVT is? Yes or No: ")

if answer == "Yes":
 print("I'm telling you anyway.")
else:
 print("Well here's the definition!")

What is IVT???

print("The intermediate value theorem states that if a continuous function, f, with an interval, [a, b] ")
print("as its domain, takes values f(a) and f(b) at each end of the interval, then it also takes any
value between f(a) ")
print("and f(b) at some point within the interval.")

Okay Let's Try it
What could go wrong???

Voodoo Magic - This was the hardest part to do. Don't question it, because I don't know either.
def read_user_function():
 function_str = input("Enter your Function: ")
 return lambda x: eval(function_str, {'x': x})

Define function f
f = read_user_function()

Retrieve lower bound.
a = input("Enter the value of a: ")
Transform answer into an integer.
a = int(a)
Retrieve upper bound.
b = input("Enter the value of b: ")
Transform answer into an integer.
b = int(b)

Run a through the function.
a_Applied = f(a)

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# Print what f(a) is equal too.
print("f(a) is equal to " + str(a_Applied))
# Run b through the function.
b_Applied = f(b)
# Print what f(b) is equal too.
print("f(b) is equal to " + str(b_Applied))

# Run a series of tests to see if IVT Applies
if a_Applied < 0 and b_Applied > 0:
    print("IVT applies on this interval.")
elif a_Applied > 0 and b_Applied < 0:
    print("IVT applies on this interval.")
elif a_Applied == 0 or b_Applied == 0:
    print("IVT applies on this interval.")
else:
    print("IVT does not apply on this interval.")

# Mr. Ritsick Wanted A UI.
# Pfffffft
```

Where I learned --> <https://learnpythonthehardway.org/book/intro.html>
Figured it out, here you go.

sepluv - June 10, 2017, 5:26 pm

I'd like to recommend following pep8 as your python style guide (<https://www.python.org/dev/peps/pep-0008/>).