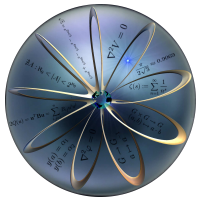

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code for Simpson's rule

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Python code for Simpson's rule

```
\PMlinkescapetext{
from math import *
def f(x):
  #function to integrate
  return sin(x)

def simpson_rule(a,b):
  #Approximation by Simpson's rule
  c=(a+b)/2.0
  h=abs(b-a)/2.0
  return h*(f(a)+4.0*f(c)+f(b))/3.0

# Calculates integral of f(x) from 0 to 1
print simpson_rule(0,1)
}
```

Integrating $\sin x$ from 0 to 1 with the previous code gives 0.45986218971... whereas the true value is $1 - \cos 1 = 0.45969769413186028259906339255 7....$