1. Use the FTC to evaluate $\displaystyle\int_0^1 \frac{4}{1+x^2}\,dx$

2. Complete the table of values of $f(x) = \frac{4}{1+x^2}$. Simplify as fractions (not decimals):

x	0	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1
$f(x)$									

3. Compute these approximations to $\int_0^1 \frac{4}{1+x^2}\,dx$ keeping all answers to four decimal places:

   LEFT(2)

   RIGHT(2)

   TRAP(2)

   MID(2)

   SIMP(2)

4. Sketch $f(x) = \frac{4}{1+x^2}$ and show the area corresponding to LEFT(2).

   Repeat for MID(2) and RIGHT(4).

5. Compute these approximations to $\int_0^1 \frac{4}{1+x^2}\,dx$ keeping all answers to 8 decimal places:

   LEFT(4)

   RIGHT(4)

   TRAP(4)

   MID(4)

   SIMP(4)

6. Compare the error in approximation of π between TRAP(2) and MID(2).

   Compare the error in approximation of π between TRAP(4) and MID(4).