

Approximation Problems Squared

Consider the following table of values of the function $f(x) = x^2$.

x	x^2
1	1
1.001	1.002001
1.002	1.004004
1.003	1.006009
1.004	1.008016
1.005	1.010025

Use the data to find some average rates of change of f on some intervals. How could you use these ARC's to approximate the value of $(1.0057)^2$? What about $(1.3589)^2$?