## **Free Response Numerical Differentiation**

The table below shows the calculated values of the first derivative of a function f(x) at x = 3 using forward divided difference method. Find the absolute relative percentage approximate error and the least number of significant digits you can trust in the solution for the step size, h = 0.00625.

h	<i>f</i> '( <i>x</i> )
0.1000000000	291.3571
0.050000000	280.4363
0.0250000000	275.1787
0.0125000000	272.5990
0.0062500000	271.3212
0.0031250000	270.6853