

**Errata List for the book**  
**“A Primer on Scientific Programming with Python**  
**3rd edition**  
**by H. P. Langtangen**

Simple typos are not reported in the list below – only more serious errors that may lead to confusion.

1. Exercise 3.2, page 120: The sample call `s(3)` should be `sum_1_div_k(3)`.
2. Exercise 3.8, page 122: The points in the Midpoint rule are wrong, they should be  $a - \frac{1}{2}h + ih$ , so the rule reads  $h \sum_{i=1}^n f(a - \frac{1}{2}h + ih)$ .
3. Exercise 3.13, page 124: The text “case where 1, 3, 5, ...” should read “case where  $n = 1, 3, 5, 10, 30, 100$ .”
4. Exercise 4.23, page 184: Very large (and very small) values of the random numbers cause problems in some of the mathematical operations. Try out `A=1` and `B=2` as well as `A=1` and `B=100`. The exercise also asks to import three expressions from 4.21, but there are only two (this point is just dropped in a new version of the exercise).
5. Exercise 5.16, page 247: The sentence “Compute  $n+1$  interpolation points taken from the curve  $f(x) = |x|$  for  $x \in [-2, 2]$ :  $x_k = -2 + 4k/n$  and  $y_k = |x_k|$ ,  $k = 0, 1, \dots, n$ ” does not make sense because `graph` takes a function `f` as argument and not the interpolation points `(xp, yp)`. The sentence should be removed and the next should read “Call the `graph` function from Exercise 5.15 with  $f(x) = |x|$ ,  $x \in [-2, 2]$ , for  $n = 2, 4, 6, 10$ .”
6. Page 306: The file `rw_csv_numpy.py` has several errors. A working version can be downloaded from <http://hplgit.github.com/scipro-primer/src/files>.
7. Exercise 7.8, page 397:
  - (a) “We want to construct a class `Lagrange`” should be “We want to construct a class `LagrangeInterpolation`”.
  - (b) The `print` statements in the code snippets lack a percentage sign between the string and the tuple of variables.
  - (c) It is not sensible to reuse the `graph` function from the `Lagrange_poly2` module since `graph` works with an explicit function `f` and not only the interpolation points `xp` and `yp`, which is what the `LagrangeInterpolation` class knows about. This means that the `plot` method must be written particularly for this class.
8. Page 572, Equation (A.35): an equality sign is missing after the term  $\tilde{f}(x)$ .