1. Consider the data sets (d) and (f) given in Table 1.4. Assume that the data can be modeled in terms of the function $y_M = a\ x$.
    a) Use the least-squares error, the Chebyshev error, and the least-absolute-deviations error to find the optimal value of the parameter a for the two data sets.
    b) Comment on the suitability of the three error concepts for the modeling of both data sets.

2. Consider the data set (f) in Table 1.4. Assume that the data can be modeled in terms of the function $y_M = a\ x$.
    a) Suggest two reasonable global error concepts in addition to the errors considered in question 1.
    b) Calculate the optimal value of the parameter a on the basis of your two global error concepts and the least-squares error.
    c) Comment on the suitability of your two error concepts.

Table 1.4

x	(a) y	(b) y	(c) y	(d) y	(e) y	(f) y
1	1.0001	1.001	1.01	1.05	1.00	1.00
2	1.9998	1.998	1.98	1.90	2.00	2.00
3	3.0003	3.003	3.03	3.15	3.00	3.00
4	3.9996	3.996	3.96	3.80	4.04	4.80
5	5.0005	5.005	5.05	5.25	5.00	5.00
6	5.9994	5.994	5.94	5.70	6.00	6.00
7	7.0007	7.007	7.07	7.35	7.00	7.00
8	7.9992	7.992	7.92	7.60	8.00	8.00