

Way of Adjustment Death Numbers

(1) Trend correction was conducted in the following way: A sinus function (see below), which fulfils the repetitive character of a year, was fitted by using the non-linear ordinary least squares estimation method. Parameters were determined by means of the Gauss method (1). The estimated relative pre- and post-distributions were computed from the fitted sinus function for each event over all 15 years (2). To receive a trend corrected data set, relative differences between these estimated ratios and an assumed pre- and post-distributions of 0.5 were calculated (3). Finally, we subtracted this portion as absolute values from the original data (4). The obtained numbers were used for further analysis. An adaptation of the data to the trend was executed for all considered events.

$$11.96397 * \cos(2\pi * d / 365 - 15312.2) + 594.9061 \quad (d = \text{day of the year}) \quad r^2 = 0.48$$

(2) The results of the sensitivity analysis are displayed in the Figures A1-A3 of this appendix.

(3) The Figure A4 displays the birthday results without consideration of the effect described by Roger.