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CALCULATING DATES AND DATE RANGES

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Precision—genealogists know all about the importance of precision when it comes to citing sources, recording details, and interpreting records. But many genealogists are less particular when it comes to calculating and expressing estimated dates. Avoiding fuzzy computations could mean the difference between solving a research problem and facing a roadblock.

Many records report age, usually expressed in years. A quick subtraction of the age from the year of the report yields a very rough estimate of when the person was born. This may be sufficient in some preliminary research, but as work progresses, detailed analysis becomes more and more important. Working with rough estimates may not be wise. Researchers must be more cautious in calculating, recording, and expressing dates.

Say a couple had children born 25 April 1862 and 29 July 1864, and that those birth dates were established using multiple sources providing reliable evidence. Another person thought to be a child of the same couple was found living apart from the family in 1880, reported to be age 16, and in 1900, reported to be age 36. Subtracting the reported ages from the census years results in 1864 for that person's approximate birth year. Some researchers might conclude that (barring a multiple birth) the candidate child couldn't belong to the couple, as the family already had a child who was born that year. In this case, the rough calculation could mislead. Calculating the range of dates paints a different picture.

Whenever an age is expressed in years only, it is impossible to calculate the precise year of birth. The age might have changed the day before the report, or it could be about to change on the following day. Calculations based on age in years on a given date, therefore, are more accurately expressed in terms of a year-long range. In the above example, the child reported as age 16 on 1 June 1880 and as age 36 on 1 June 1900 (1 June being the official census date in those years) has a calculated birth date falling between 2 June 1863 and 1 June 1864—which means the child could fit in the candidate family.

When age is expressed in years, months, and days—as sometimes seen on grave markers, death records, and in obituaries—the result of the computation will be more precise than when one or more pieces of information is missing. But even when all the elements of the age are stated, straight addition and subtraction could result in answers that differ by a day or two. Some months are longer than others, resulting in variations in reports and calculations. Some people consider one month to consist of thirty days; others consider a month to be the time span between days bearing the same number. For example, the periods between January 6th and February 6th and between February 6th and March 6th could both be considered one month, even though the number of intervening days is unequal. For this reason, a calculated date should always be considered an approximation—and expressed as such.

If a record describes a person as being in a given year of his or her age, that person has not yet reached the stated age. A woman in her eighty-fourth year, for example, is eighty-three years old. Another important calendar-related detail about which researchers should be aware is the transition from the Julian to the Gregorian calendar. The change, which took place in 1752 in what is now the United States, meant that the new year no longer began on March 25, but on January 1, and September 1752 was shortened by eleven days to correct for earlier miscalculations. Researchers working with records from 1752 and earlier should be aware of the changes and should understand the practice of double-dating.[1]

Date calculators are readily available online. They are also built in to genealogy software. These utilities work in the same general way. The user enters known data and the calculator returns the desired date or date range. For some examples, see [Cyndi's List](#), which provides links devoted to topics such as “[Birth Date Calendars and Calculators](#)” and “[Calculators and Converters](#).” For information about calculating dates and date ranges by hand, see Amy Lerner Giroux’s “[Skillbuilding: Date](#)

Calculations”[2] and Barbara Levergood’s “Calculating and Using Dates and Date Ranges.”[3]

To be thorough and careful, researchers should clearly identify calculated dates and date ranges in their notes, software files, trees, and other written work products. Words such as “calculated,” “about,” and “circa” serve as appropriate flags; it is important to include explanations about the bases for the calculation and the methods used. Consistency in method and expression are essential for accurate analysis.

Sound conclusions require precision in every aspect of research, including calculation of dates and dates ranges. Replacing approximated years with appropriately calculated and stated date ranges improves precision. Marking dates as calculated or approximated and attaching explanations will help genealogists understand and evaluate the data as work progresses.

[1] “Double-dating” refers to a method used to express some dates to account for the old- and new-style calendars. Some references to pre-1752 dates falling between 1 January and 24 March, inclusive, state the year as it would have been rendered using *both* calendars—for example, 6 February 1734/5 (1734 for the calendar in effect at the time, but 1735 for the new-style calendar). For a straightforward explanation, see Val D. Greenwood, *The Researcher’s Guide to American Genealogy*, 3rd ed. (Baltimore: Genealogical Publishing, 2000), 43–45.

[2] Amy Larner Giroux, “Skillbuilding: Date Calculations,” *Board for Certification of Genealogists* (<https://bcgcertification.org/skillbuilding-date-calculations/> : 7 June 2017), from her article “Date Calculations,” in *OnBoard* 9 (May 2003): 12–13, 10.

[3] Barbara Levergood, “Calculating and Using Dates and Date Ranges,” *National Genealogical Society Quarterly* 102 (March 2014): 51–75; PDF, *NGS Quarterly Archives* (http://www.ngsgenealogy.org/cs/ngsq_archives : 16 June 2017).

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