

# ISO 8601-1:2019 (E)

## Date and time — Representations for information interchange — Part 1: Basic rules

---

### Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms, definitions and symbols
3.1	Terms and definitions
3.1.1	Basic concepts
3.1.2	Time and date units
3.1.3	Representations and formats
3.2	Symbols
3.2.1	General
3.2.2	Time scale component symbols
3.2.3	Composite component symbols
3.2.4	Symbols used in place of digits or signs
3.2.5	Designator symbols
3.2.6	Separator symbols
4	Fundamental principles
4.1	Basic rules
4.2	Time scales
4.2.1	The Gregorian calendar
4.2.2	The week calendar
4.2.3	The 24-hour clock
4.3	Time scale components and units
4.3.1	General
4.3.2	Calendar year and years duration
4.3.3	Calendar month and months duration
4.3.4	Calendar week number and weeks duration
4.3.5	Calendar day of month and days duration
4.3.6	Calendar day of week
4.3.7	Calendar day of year
4.3.8	Clock hour and hours duration
4.3.9	Clock minute and minutes duration
4.3.10	Clock second and seconds duration
4.3.11	Decade
4.3.12	Century
4.3.13	Time shift
4.4	Expansion
4.5	Leading zeros
5	Date and time representations
5.1	General
5.2	Date
5.2.1	General
5.2.2	Calendar date
5.2.2.1	Complete representations
5.2.2.2	Representations with reduced precision
5.2.2.3	Expanded representations
5.2.3	Ordinal date

- 5.2.3.1 Complete representations
- 5.2.3.2 Expanded representations
- 5.2.4 Week date
  - 5.2.4.1 Complete representations
  - 5.2.4.2 Representations with reduced precision
  - 5.2.4.3 Expanded representations
- 5.3 Time of day
  - 5.3.1 Local time of day
    - 5.3.1.1 General
      - 5.3.1.2 Complete representations
      - 5.3.1.3 Representations with reduced precision
      - 5.3.1.4 Representations with decimal fraction
  - 5.3.2 Beginning of the day
  - 5.3.3 UTC of day
  - 5.3.4 Local time scale and UTC
    - 5.3.4.1 Time shift between local time scale and UTC
    - 5.3.4.2 Local time of day with the time shift between local time scale and UTC
  - 5.3.5 Omissions of time designator
- 5.4 Date and time of day
  - 5.4.1 General
    - 5.4.2 Complete representations
      - 5.4.2.1 Complete representations for calendar date and time of day
      - 5.4.2.2 Complete representations for ordinal date and time of day
      - 5.4.2.3 Complete representations for week date and time of day
    - 5.4.3 Representations other than complete
  - 5.5 Time interval
    - 5.5.1 Means of specifying time intervals
      - 5.5.2 Duration
        - 5.5.2.1 General
          - 5.5.2.2 Complete representation
          - 5.5.2.3 Representations other than complete
          - 5.5.2.4 Alternative format
        - 5.5.3 Complete representations
          - 5.5.3.1 Representations of time intervals identified by start and end
          - 5.5.3.2 Representations of time interval identified by start and duration
          - 5.5.3.3 Representations of time interval identified by duration and end
          - 5.5.3.4 Other complete representations
      - 5.5.4 Representations other than complete
    - 5.6 Recurring time interval
      - 5.6.1 Means of specifying recurring time intervals
      - 5.6.2 Separators and designators
      - 5.6.3 Complete representations
      - 5.6.4 Representations other than complete

**Annex A (informative) Example date and time expressions and representations**

- A.1 Date and time expressions
  - A.1.1 Date
    - A.1.2 Time of day
    - A.1.3 Date and time of day
    - A.1.4 Time interval
      - A.1.4.1 Defined by start and end
      - A.1.4.2 Defined by start and duration
      - A.1.4.3 Defined by duration and end
    - A.1.5 Recurring time interval
      - A.1.5.1 Defined by recurrences, start and end
      - A.1.5.2 Defined by recurrences, start and duration
      - A.1.5.3 Defined by recurrences, duration and end
  - A.2 Date and time representations
    - A.2.1 Date
    - A.2.2 Time of day
    - A.2.3 Date and time of day
    - A.2.4 Time interval
    - A.2.5 Recurring time interval