

The Zorgian Calendar System

Basic Structure

The inhabitants of planet Zorg use a lunisolar calendar based on the primary moon of their planet. Their calendar follows these fundamental principles:

1. **Time Units:**
 - 1 day = 24 zorgs (similar to Earth hours)
 - 1 zorg = 1080 mizes (similar to Earth minutes)
 - A week consists of 7 days
2. **Moon Cycle:**
 - The primary moon orbits Zorg every 29 days, 12 zorgs, and 793 mizes
 - This period is known as a “moon cycle”
3. **Year Structure:**
 - Regular years have 12 months
 - Leap years have 13 months
 - Leap years occur 7 times in a 19-year cycle (years 3, 6, 8, 11, 14, 17, and 19)
4. **Month Lengths:**
 - Months alternate between 29 and 30 days
 - In leap years, an extra 30-day month is inserted as the 6th month

Calendar Rules

New Year Determination

The New Year (first day of the first month) is determined by these rules:

1. Calculate the time of the first moon sighting of the year
2. If the moon sighting occurs at or after 18 zorgs (3/4 of the day), postpone New Year to the next day
3. New Year cannot fall on days 1, 4, or 6 of the week (postpone to the next day if needed)
4. If the day is 3, and the moon sighting occurs at or after 9 zorgs and 204 mizes, postpone New Year to day 5 (applies only in regular years)
5. If the day is 2, and the previous year was a leap year, and the moon sighting occurs at or after 15 zorgs and 589 mizes, postpone New Year to day 3

Year Length Adjustments

The length of a year must ensure that the next year's New Year falls correctly:

1. A regular year should be 354 days (12 months alternating between 30 and 29 days)
2. A leap year should be 384 days (13 months, with the extra 30-day month)
3. Adjustments can be made:
 - If needed, a “short” year can have one day less (353 or 383 days)
 - If needed, a “long” year can have one day more (355 or 385 days)
 - These adjustments are made by modifying the length of the second or third month

Festivals and Special Days

The Zorgian calendar includes several major festivals:

1. **New Year Festival:** 1st day of the 1st month
2. **Moon Festival:** 10th day of the 1st month

3. **Star Festival:** 15th day of the 1st month
4. **Harvest Festival:** 15th day of the 7th month (or 8th month in leap years)

Calendar Calculations

Finding the Moon Sighting

To calculate the moon sighting for any year:

1. Determine how many months have passed since the beginning of the calendar
2. Multiply by the moon cycle length (29d, 12z, 793m)
3. Add to the first recorded sighting (2d, 5z, 204m)

Determining Leap Years

A Zorgian year is a leap year if: 1. Find the remainder when dividing the year by 19 2. If the remainder is 3, 6, 8, 11, 14, 17, or 0 (counted as 19), it's a leap year

Modern Usage

The current Zorgian year is 5785, which corresponds roughly to Earth year 2024-2025. The Zorgians are particularly proud of their calendar's mathematical precision and consider calendar calculation an important field of study.