

Activity: Determine when the calendar for 2018 will next be the same and determine why that is while referencing graph theory.

Graph theory - the mathematical study of the properties of the formal mathematical structures called graphs (Wolfram mathworld)

The year 2018 started on a Monday and has exactly 365 days.

The first recorded calendar year to have the exact same start day and dates was the year 1900. The last calendar year listed to have the exact same start day and dates is the year 2131.

Interesting to note that there are dozens of years with the exact same calendar.

The gap between like-calendar years is always 6 years or 11 years. Leap years most likely have an impact on the irregularities of like-calendars.

Also good to note that although the dates may be the same, holidays will not be on the same day as those are based on a solar calendar.

The next year that I can re-use my 2018 calendar will be 2029, 11 years from now!

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Next, I explored my birthday and when it will be on the same day as the year I was born.

My birthday, November 3, 1997, was on a Monday of the 307th day of that year and the next time I can use my 1997 calendar exactly the same will be 2025.

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After further research, I found that the standard Gregorian calendar repeats itself on a 28-year cycle. The first repeat is 6 years while the next two repeats are spread 11 years apart.