

Concept of Calendar:

Ordinary year: 365 days eg: 1879, 2009, 2019, etc

Leap Year: 366 days eg: 2012, 2016, 2020, etc.

$$\begin{array}{r} 52 \text{ --- Quotient} \\ 7 \overline{) 365} \\ \underline{- 35} \\ 15 \\ \underline{- 14} \\ 1 \text{ --- Remainder} \end{array}$$

Ordinary year has 52 week & one extra day called Odd Day.

$$\begin{array}{r} 52 \text{ --- Quotient} \\ 7 \overline{) 366} \\ \underline{- 35} \\ 16 \\ \underline{- 14} \\ 2 \text{ --- Remainder} \end{array}$$

Leap year has 52 weeks & two extra days called Odd Days.

## Criteria for leap year:

1. If year is divisible by 4 & not divisible by 100, it is a leap year.
2. If the year is divisible by 100 & not divisible by 400, it is not a leap year.
3. If the year is divisible by 400, it is a leap year.

## Types of calendar reasoning questions:

① Counting odd days:

eg: How many odd days in 1000 years?

$$\begin{array}{r} 142 \\ 7 \overline{) 1000} \\ \underline{- 7} \phantom{00} \\ 30 \\ \underline{- 28} \phantom{0} \\ 20 \\ \underline{- 14} \\ 6 \end{array}$$

## ② With Reference data:

eg: If today is Monday, what day it will be 128 days after today?

Soln:

128 days  $\rightarrow$  ? weeks

$$\begin{array}{r} 18 \\ \sqrt{128} \\ - 72 \\ \hline 56 \\ - 56 \\ \hline 0 \end{array}$$

$$128 \text{ days} = 18 \text{ weeks} + 2 \text{ days}$$

Today = Monday

After 18 weeks, it is Monday again

& after (18 weeks + 2 days)  $\rightarrow$  it will be Wednesday.

## ③ Without reference date:

eg: What was the day on 26<sup>th</sup> January, 1950?

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