



(An Autonomous Institution)

Calendar

Introduction

All Multiple of 4

52 Weeks + 1 Day

52 Weeks + 2 days

Ordinary year (365 days) → odd days
 (Feb 28 days)

Leap year (366 days) → odd days
 (Feb 29 days)

2019 ÷ 4 — Not divisible

2020 ÷ 4 — Leap year (divisible)

2016 - Leap year

2012 - Leap year

1947 - X

1945 - X

1923 - X

1916 - Leap year

○ Last 2 digit 00 - Century year

1800 → Xoy ÷ by 400

1600 - Leap year

Divisible

Leap year

odd day

0 - Sunday

1 - Monday

2 - Tuesday

3 - Wednesday

4 - Thursday

5 - Friday

6 - Saturday

Q) In 10 odd days, how many odd days are there in the given day?

10 days = 1 Week + 3 odd days Wed

8 days = 1 Week + 1 odd day Mon

16 days = 2 Weeks + 2 odd days Tues

21 days = 3 Weeks + 0 odd days Sun

50 days = 7 Weeks + 1 odd day Mon

56 days = 8 Weeks + 0 odd day



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Day of the Week

Q1 Which day of the week was 12 Feb 1941?

12 Feb 1941 - 0.Y

↓
Not a Leap year

1941 $\xrightarrow{\text{Split}}$ 1600 + 300 + 40 + Jan + 12 Feb

(0x4) $\begin{matrix} 4 \\ 10 \cdot 30 \end{matrix}$

= 0 + 1 + (10LP + 30 0Y) + 3 + 12 ~~day~~ add days

= 0 + 1 + (10x2 + 30x1) + 3 + 12

= 1 + 20 + 30 + 15

= 16 + 50 = 66 days

= $\frac{66}{7} = 9 \text{ Weeks} + 3 \text{ add day}$

12th Feb 1941 = Wednesday

Month	Days	add day	add day
Jan	31	-3	100 - 5
Feb	28	-0	200 - 3
Mar	31	-3	300 - 1
Apr	30	-2	400 - 0
May	31	-3	
June	30	-2	0 - Sun
July	31	-3	1 - Mon
Aug	31	-3	2 - Tues
Sep	30	-2	3 - Wed
Oct	31	-3	4 - Thurs
Nov	30	-2	5 - Fri
Dec	31	-3	6 - Sat

Every 31 days in Month
↓
3 add days

Every 30 days in Month
↓
2 add days



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Q3 Which day of the week was 21 July 1630?

$$1630 - 1600 + 29 + (\text{Jan to June}) + 21$$

$$= 0 + 7 \times 2 + 22 + 13 + 21$$

$$= 0 + 14 + 22 + 13 + 21$$

$$= 70 \text{ days} = 10 \text{ Week} + 0 \text{ odd day}$$

\therefore 21st July 1630 - Sunday

$$\begin{array}{r} 7 \\ 4 \overline{) 29} \\ \underline{28} \\ 1 \end{array}$$

Q4 Which day of the week was 2 May 1921?

$$1921 - 1600 + 300 + 20 + (\text{Jan to Apr}) + 2$$

$$= 0 + 1 + (5 \times 2 + 15 \times 1) + (3 + 0 + 3 + 2) + 2$$

$$= 1 + 10 + 15 + 8 + 2$$

$$= 36 \text{ days}$$

$$= 5 \text{ Week} + 1 \text{ odd day}$$

2 May 1921 = Monday

$$\begin{array}{r} 5 \\ 7 \overline{) 36} \\ \underline{35} \\ 1 \end{array}$$



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What day of the week was 12 March 1940? - L Y

$$\begin{aligned} 1940 &= 1600 + 300 + 39 (\text{Jan} + \text{Feb}) + 12 \\ &= 0 + 1 + (9 \times 2 + 30 \times 1) + 3 + 1 + 12 \\ &= 1 + 18 + 30 + 4 + 12 \\ &= \underline{65} \text{ odd days} \end{aligned}$$

$$\begin{array}{r} 9 \\ 4 \overline{)39} \\ \underline{36} \\ 3 \end{array}$$

$$= \frac{7}{9} \text{ Week} + 2 \text{ odd days} = \text{Tuesday}$$

12th March 1940 = Tuesday

What day of the week was 18 April 1964? - L Y

$$\begin{aligned} 1964 &= 1600 + 300 + 63 + (\text{Jan to March}) + 18 \\ &= 0 + 1 + (15 \times 2 + 48 \times 1) + (3 + 1 + 3) + 18 \\ &= 1 + 30 + 48 + 7 + 18 \\ &= \underline{104} \text{ days} \\ &= 14 \text{ Week} + 6 \text{ odd day} \end{aligned}$$

$$\begin{array}{r} 14 \\ 7 \overline{)104} \\ \underline{7} \\ 34 \\ \underline{28} \\ 6 \end{array}$$

18th April 1964 = Saturday



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Q9 What day of the week was 2 May 1920?

$$\frac{35 \text{ odd days} - 5 \text{ Week} + 0 \text{ odd days}}{7}$$

2 May 1920 = Sunday

Q10 What day of the week was 2 Dec 1816?

$$= \frac{50 \text{ odd days} - 7 \text{ Weeks} + 1 \text{ odd day}}{7}$$

2 Dec 1816 = Monday

On what dates?

Q1 on what dates of April 2001 did Wednesday falls?

a) 1st, 5th, 15th, 22nd, 29th

b) 2nd, 9th, 16th, 23rd, 30th

c) 3rd, 10th, 17th, 24th

d) 4th, 11th, 18th, 25th

1st day of April 2001

0^y

$$2001 = 1600 + 400 + (\text{Jan to March}) + 1$$

$$= 0 + 0 + (3 + 0 + 3 + 1) + 1$$

$$= 6 + 1 = 7 = 1 \text{ Week} + 0 \text{ day} = \text{Sunday}$$

Ans = option - (d)



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on what dates of May 1945 did Saturday fall?

1st May 1945
OY

$$1945 = 1800 + 300 + 44 + (\text{Jan} + \text{Feb} + \text{March} + \text{April}) + 1$$

$$= 0 + 1 + (11 \times 2 + 33 \times 1) + (3 + 0 + 3 + 2) + 1$$

$$= 1 + 22 + 33 + 8 + 1$$

$$= 65 \text{ odd days}$$

1st - Tue
2nd - Wed
3rd - Thurs
4th - Fri
5th - Saturday

$$= 9 \text{ week} + \underset{\wedge}{2} \text{ day} = \text{Tuesday}$$

5th May / 12th May / 19th May / 26th May

on what dates of Feb 1842 did Thursday fall?
OY

1st Feb 1842

$$1842 = 1600 + 200 + 41 + (\text{Jan}) + 1$$

$$= 0 + 3 + (10 \times 2 + 39 \times 1) + 3 + 1$$

$$= 3 + 20 + 31 + 4$$

$$= 7 + 51 = 58 \text{ odd days} = 8 \text{ week} + 2 \text{ odd day}$$

1st - Tues
2nd - Wed
3rd - Thurs

$$= \text{Tuesday}$$

3rd Feb / 10th Feb / 17th Feb / 24th Feb