



CSAT

REASONING



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Types:

Calendar (कैलेंडर) (2-3) Question.

- ① History (इतिहास)
- ② Find a single day of a single year.
- ③ Calendar Repeat.
- ④ Same Year Based Question
- ⑤ Diff. Year Based Question
- ⑥ mix Question

जुलियन सीज कैलण्डर

Father of Calendar

Pope Gregory
"पोप ग्रेगोरियन"
↓
13th

सुधार

1582

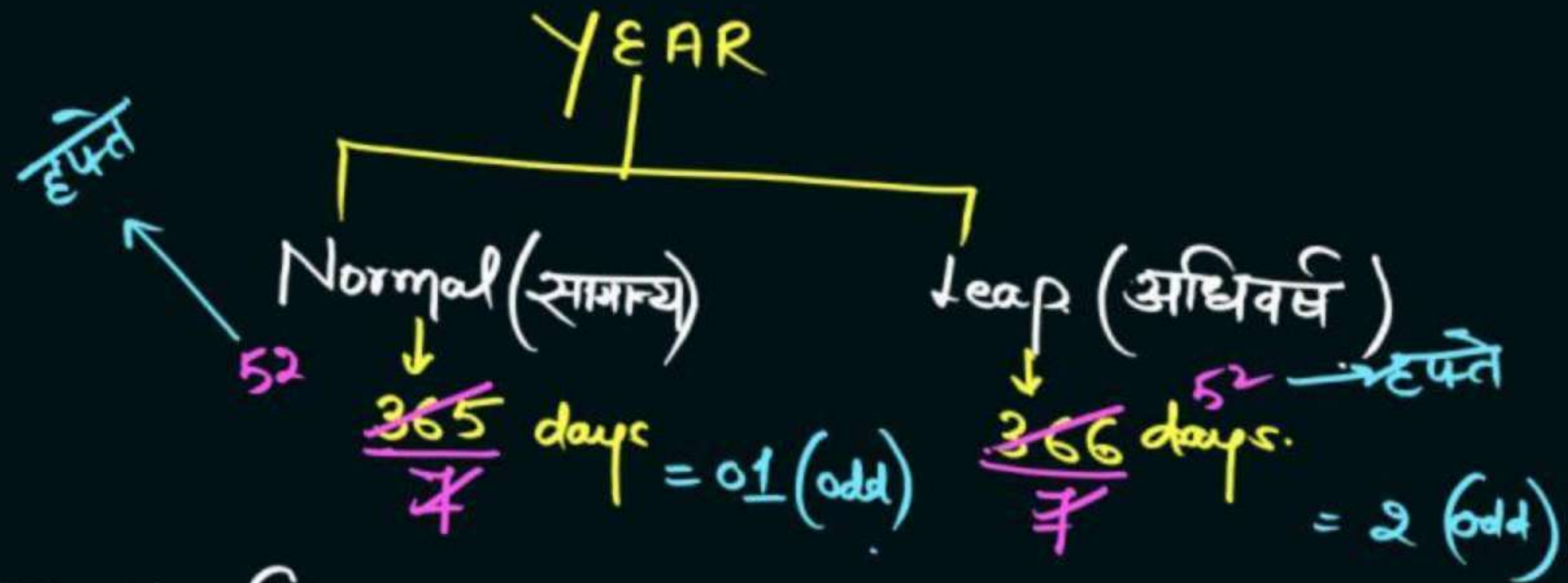
→ "18 साल"

↓
1600 - "इस्ट इंडिया कम्पनी"

Book

↓
"Calendar"

पहले



Leap year $\Rightarrow \frac{\text{Given year}}{4} = \text{भागफल}$

Odd Days (Extra Days) $\Rightarrow \frac{\text{Given Days}}{7} = \boxed{\text{Rem.}}$

Odd Day < 7

January

↓ 4-एवं

~~31~~
~~7~~

= 3 (odd days)
शेष

Christmas → 25-Dec.

| 1 week

7

↓
1 Jan

↳ New year

Q. 1 हफ्ते में कुल कितने Weekend होते हैं ?

① 1

② 2

③ 3

④ More Than 3

↓
1 Weekend → 2 Day
Sat Sun

Q: 1 leap year $\rightarrow$ How many Weekends?

$\therefore$ 1 Week — 1 weekend

$\therefore$ 52 week $\rightarrow$ 52 weekends.

Q. If Ramish Celebrate New year of 2023 on, Sat
So, Which Day did he Celebrate, Christmas
On Same year?

Soln →

{ Normal year → I^{st} Same → last day.
Leap year → $I^{\text{st}} + 1$ → last day

∴ 1 Jan 2023 → Sat

∴ 31 Dec - 2023 → Sat

- 7
24 → Sat

25 Dec - Sunday

1 Jan-2001 - Fri

1 Jan-2005 - ? Wed

4 Jan-2005 - Sat

1	+	1
2	+	1
3	+	1
4	+	1
5	+	2

N.Y. } +1
N.Y.

L.Y. } +2
N.Y.

4 Jan. 1993 - Fri

4 (11) Jan. 2001 - ? Mon

Monday

93	+	1
94	+	1
95	+	1
96	+	1
97	+	2
98	+	1
99	+	1
00	+	1
01	+	2

5 Jan. 2003 - Fri

5 (21) Jan 2011 - Monday

5
| +7
12 - Mon
| +7
19 - Mon
|
20 - Tue

21 → Wednesday

3 } +1
4 }
5 } +2
6 } +1
7 } +1
8 } +1
9 } f2
10 } f1
11 } f1

Q. In a First Century, how many leap year and odd day we have?

$$1 \text{ L.Y} = 2 \text{ odd}$$

$$1 \text{ N.Y} = 1 \text{ odd}$$

$$\therefore 1 \text{ L.Y} = 2 \text{ odd}$$

$$\therefore 24 \times 2$$

$$100 \text{ yrs.} \rightarrow \begin{array}{c} 24 \\ \hline 99 \\ \hline 4 \end{array} + 1 (\text{Normal})$$

$$\boxed{24 \text{ L.Y.}} + 76 \text{ Normal}$$

$$\downarrow \downarrow \rightarrow 48 \text{ odd} + 76 \text{ odd}$$

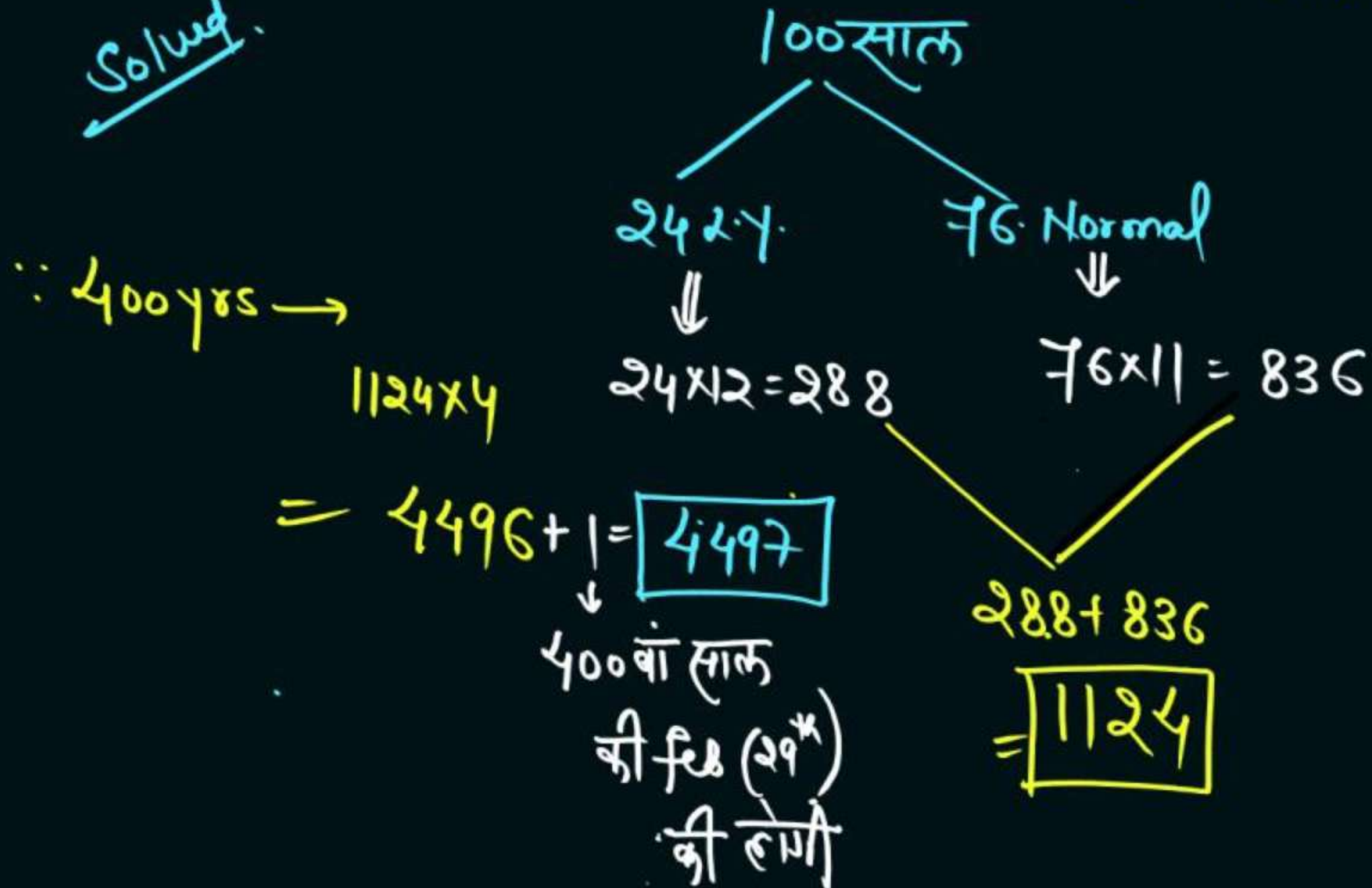
$$= \boxed{124 \text{ odd}}$$

$$1 \text{ Y.} \rightarrow \begin{array}{c} 4 \\ \downarrow \\ \text{Normal} \end{array} \quad \begin{array}{c} 400 \\ \downarrow \\ \text{Century} \end{array}$$

$$\frac{124}{4} = \boxed{31 \text{ odd}} \rightarrow \text{शेष}$$

Q: In a 1st 400 years, How many date of 29 was fall
 पहले 400 साल तक, कितनी बार 29 तारीख पड़ी थी? down?

Solved.



Normal year
 ↓
 11 Month (Feb)
 ↓
 29th

1st year
 → 12 month
 → 29th

YEAR ODD DAYS.

$$100 \text{ yrs} \longrightarrow \textcircled{5} \text{ odd}$$

$$200 \text{ yrs} \longrightarrow 5+5 = \frac{10}{2} = \textcircled{3} \text{ (शेष)}$$

$$300 \text{ yrs} \longrightarrow 5+5+5 = \frac{15}{7} = \textcircled{1} \text{ odd}$$

$$\boxed{400 \text{ yrs}} \longrightarrow 5+5+5+5+1 = \frac{21}{7} = \textcircled{0} \text{ odd}$$

$$500 \text{ yrs} \longrightarrow \frac{400}{0} + \frac{100}{5} = \boxed{5 \text{ odd}}$$

$$600 \text{ yrs} \longrightarrow \frac{400}{0} + \frac{200}{3} = \textcircled{3}$$

$$700 \text{ yrs} = 400 + 300 = \textcircled{1}$$

$$800 \text{ yrs} \longrightarrow 0$$

$$900 \Rightarrow \frac{800}{0} + 100 = \textcircled{5}$$

$$1000 \text{ yrs} \Rightarrow \frac{800}{0} + 200 = \textcircled{3}$$

$$1900 \Rightarrow \frac{1600}{0} + 300 = \textcircled{1}$$

7 feb 1624 → wed

-400

7 feb. 2024 → Wed

+400

7 feb 2424 → wed

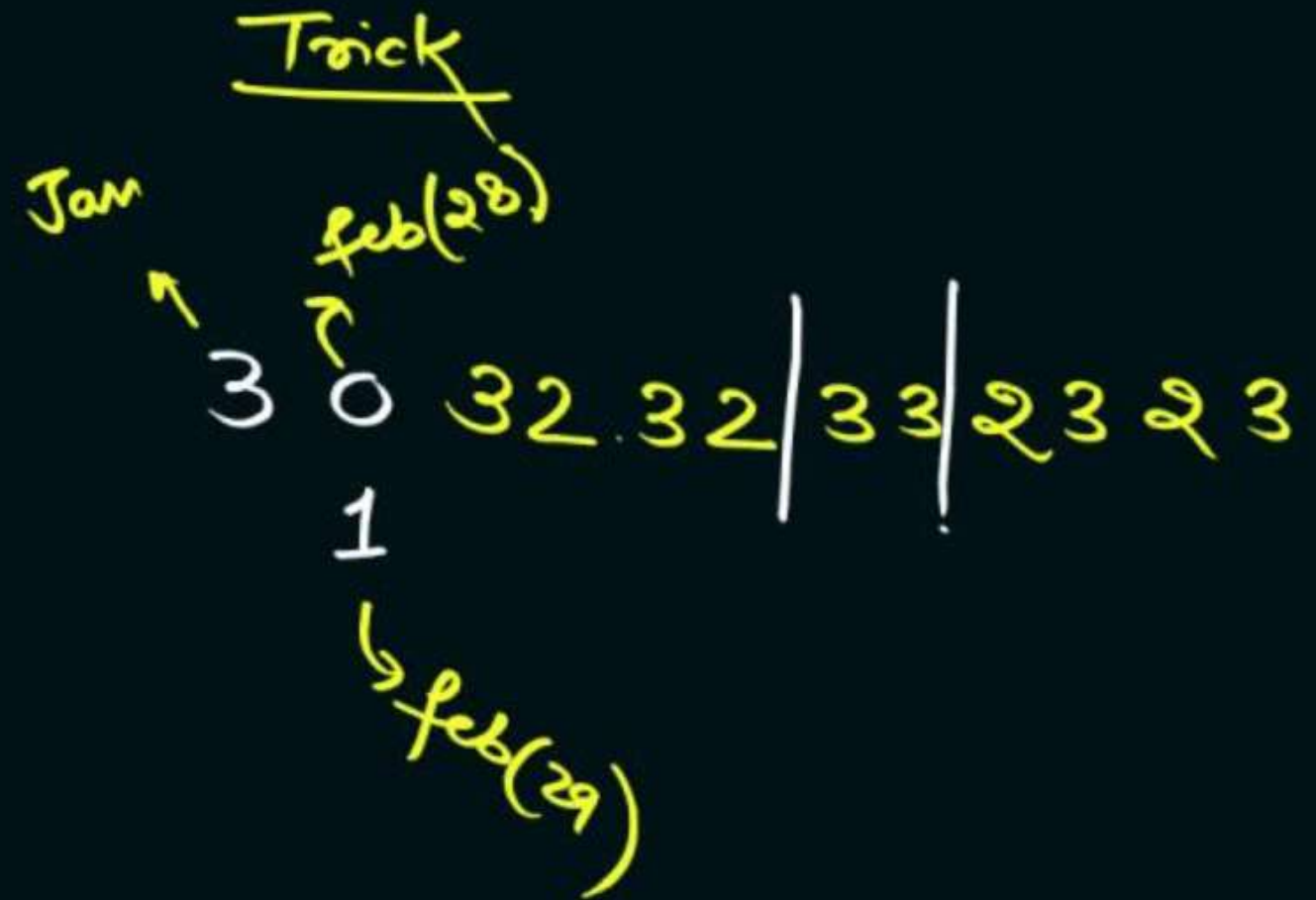
Month odd Days

$$\text{Jan} \rightarrow \frac{31}{7} = \textcircled{3}$$

$$\text{Feb} \rightarrow \frac{28}{7} = 0, \frac{29}{7} = 1$$

$$\text{Mar} = \frac{31}{7} = 3$$

$$\text{April} = \frac{30}{7} = 2$$



Jan

↑

$$3 + 0 + 3 + 1$$

$$= \frac{7}{7} \text{ odd} = 0 \text{ (Sunday)}_{21}$$

3 March 1985 ? ^{1 odd}

$$\frac{1600}{0} + \frac{300}{1} + \frac{84}{4} \text{ add } 21$$

$$84 + 21 = \frac{105}{7} \text{ odd} = 0$$

शनिवार

Days:-

SUN - $7/7 = 0$

MON - 1

TUE - 2

WED - 3

THU - 4

FRI - 5

SAT - 6

① 26 Mar. 1935 -

② 15 Aug. 1870 - ?

③ 13 July 1990 - ?

26 March. 1935. 1 odd

$$3 + 0 + 26 + 1$$

$$\begin{array}{r} 1600 + 300 + \frac{35}{4} \\ \hline 0 \quad 1 \quad 4 \end{array}$$

$$\frac{35}{4} \text{ odd} = 2 \text{ (Tue)}$$

$$\frac{40}{4} \text{ odd} = 0$$

शेष

15 Aug - 1870 - 5 odd

$$\frac{1600}{0} + \frac{200}{3} + \frac{69}{4}$$

~~3+0+3+2+3+2+3+15+5~~

$\frac{8}{7} = 1$ Monday

~~86~~ odd = 2 odd
शेष

13 Jul. 1990 ⁷

$$\rightarrow \frac{1600}{0} + \frac{300}{1} + \frac{22}{4}$$

~~303232+13+7~~

$$S = (f_i)$$

$$\frac{11}{7} \text{ odd} = 6$$

7 feb. 2024 ⁰ → ?

$$\rightarrow \frac{2000}{0} + \frac{\cancel{2}3}{4}$$

$$3 + 7 + 0$$

$$= \frac{10}{7} \text{ odd} = \textcircled{3} \textcircled{\text{Wed}}$$

$$\frac{\cancel{2}8}{7} \text{ odd} = 0$$

4 Sep $\overset{3 \text{ odd}}{\textcircled{2093}} \rightarrow ?$

$$\begin{array}{r} 2000 + \overset{23}{92} \\ \hline 0 \end{array}$$

$$30.3\cancel{2}\cancel{3}\cancel{2}.3 \quad 3+4+3$$

$$\frac{12}{7} = 5 \text{ (Friday)}$$

$$\frac{115}{7} \overset{\text{odd}}{=} \textcircled{3 \text{ odd}}$$

26 feb. 2003-? ⁰²
→ 2000 + 02 odd
0

~~3 + 26 + 2~~

3 - wed

4 Mar. $\overset{0}{\underbrace{2001}_{?}}$

$$\begin{array}{r} 2000 + 0 \\ \hline 0 \end{array}$$

$$\cancel{3} + 0 + \cancel{4} + 0$$

$$= 0 (\text{Sunday})$$

26 Jan. 2000 - ?

5'
1999

$$26 + 5 = \frac{31}{7} = \textcircled{3}$$

Wed

24

$$\frac{1600}{0} + \frac{300}{1} + \frac{99}{4}$$

$$= \frac{123}{7} = \textcircled{4}$$

Same Year Based.

Q:

8 Feb. 2024 → Thu + 0

15 Aug. 2024 → Thu

$$21 + 3 + 2 + 3 + 2 + 3 + 15$$

$$= 0$$

7 July - 1964 - Fri + 1

21 Oct - 1964 - ? (Sat)

$$24 + 3 + 2 + 2/$$

$$\frac{29}{7} = \textcircled{1}$$

~~26 Jan. 2024 → Fri + 6~~

~~4 Jul. 2024 - ?~~ Thu

$$\cancel{5} + 1 + 3 + \cancel{2} + \cancel{3} + 2 + \cancel{4}$$

6

6 Jul. 2025 - Sat

11 Jan. 2025 - ?



~~11 Jan. 2025 - Friday~~

6 Jul. 2025 - Sat - 1

$$\cancel{2} + 0 + \cancel{3} + \cancel{2} + \cancel{3} + 2 + 6$$

$$\frac{8}{7} = \textcircled{1} \therefore$$

6 Nov- 19~~92~~- Sat-3
21 Jul- 19~~92~~- ? (Wed)

$$10 + 3 + 2 + 3 + 6$$

$$\frac{24}{7} = \textcircled{3}$$

2 Feb - 1996 - Sun +1

27 Jul - 1996 - ? Monday

$$\cancel{27} + \cancel{3} + \cancel{2} + \cancel{3} + 2 + 27$$

$$\frac{29}{7} = \textcircled{1}$$

2024

Trick

Calendar Repeat

2023/4 = ③
शेषफल

Given year $\xrightarrow[\text{4}]{\text{Last 2 Digit}}$

शेषफल

2023
+ 11

2034

1 $\xrightarrow{\text{given year}}$ +6

2/3 $\longrightarrow$ ③+11

0 $\longrightarrow$ +28

$$\frac{2017}{4} \Rightarrow ? \quad \textcircled{1} \rightarrow +6$$

$$\begin{array}{r} 2017 \\ +6 \\ \hline 2023 \end{array}$$



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