

1. What is the day of week that is 21 days after February 13, Saturday?

Ans: Saturday.

We know, 1 week = 7 days

$$\begin{array}{r} 3 \\ 7 \overline{) 21} \\ \underline{21} \\ 0 \end{array}$$

Since remainder 0 so the day will be same.

2. January 1 of the year 2018 was Monday. What day of week was 40 days after January 1?

Ans: Saturday.

We know, 1 week = 7 days

$$\begin{array}{r} 5 \\ 7 \overline{) 40} \\ 35 \\ \hline 5 \end{array}$$

Since remainder 5 so five days after Monday is Saturday.

3. What is the date that is 49 days after June 25?

Ans: 13 August.

After 25 June, remaining days of June = $30 - 25 = 5$

Remaining days = $49 - 5 = 44$

July has 31 days

Required date = $44 - 31 = 13$ August

4. When October 1 is Saturday, what day of week is October 31?

Ans: Monday.

After 1st October, remaining days = $31 - 1 = 30$

$$\begin{array}{r} 4 \\ 7 \overline{) 30} \\ 28 \\ \hline 2 \end{array}$$

Since remainder 2 so two days after Saturday is Monday.

5. How many days were there in February of the following years?

a) 1800, b) 1900, c) 1918, d) 1984, e) 1820

a)

$$\begin{array}{r} 4 \\ \hline 400) 1800 \\ 1600 \\ \hline 200 \end{array}$$

Since there is a remainder 200.

∴ 1800 is not a leap year.

b)

$$\begin{array}{r} 4 \\ \hline 400) 1900 \\ 1600 \\ \hline 300 \end{array}$$

Since there is a remainder 300.

∴ 1900 is not a leap year.

c)

$$\begin{array}{r} 479 \\ \hline 4) 1918 \\ 16 \\ \hline 31 \\ 28 \\ \hline 38 \\ 36 \\ \hline 2 \end{array}$$

Since there is a remainder 2.

∴ 1918 is not a leap year.

d)

$$\begin{array}{r} 496 \\ \hline 4 \overline{) 1984} \\ 16 \\ \hline 38 \\ 36 \\ \hline 24 \\ 24 \\ \hline 0 \end{array}$$

Since there is no remainder.

∴ 1984 is a leap year.

e)

$$\begin{array}{r} 455 \\ \hline 4 \overline{) 1820} \\ 16 \\ \hline 22 \\ 20 \\ \hline 20 \\ 20 \\ \hline 0 \end{array}$$

Since there is no remainder.

∴ 1820 is a leap year.

6. What number century was each of the following years?

a) 1945, b) 1300, c) 1899, d) 108, e) 1015, f) 2001

Ans: a) The year of 1945 was in the century 20th century.

b) The year of 1300 was in the century 13th century.

c) The year of 1899 was in the century 19th century.

d) The year of 108 was in the century 2nd century.

e) The year of 1015 was in the century 11th century.

f) The year of 2001 was in the century 21st century.