Chapter- 15

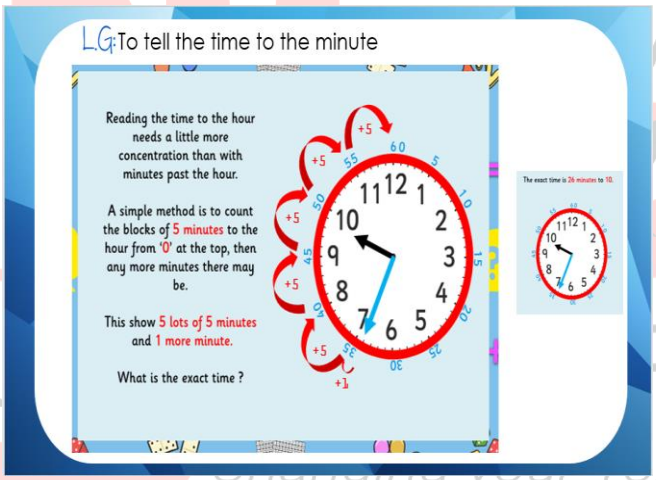
Time and calendar

STUDY NOTES

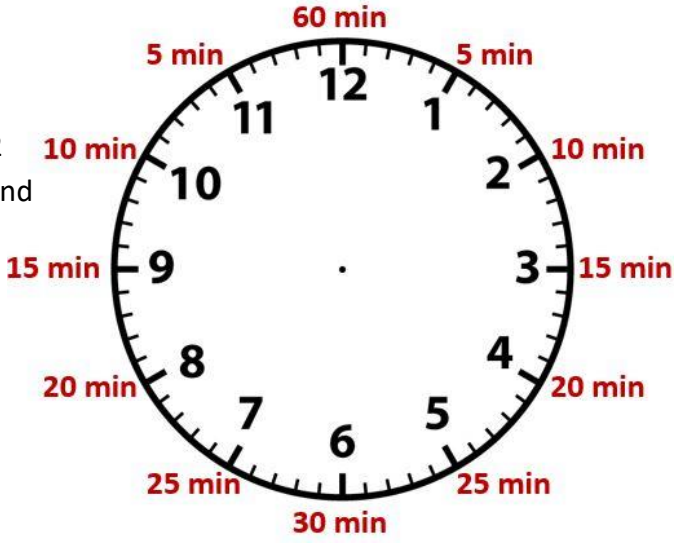
LEARN ABOUT:

- **Telling time correct to the nearest minutes**
- **Conversion of time**
- **Calendar**

❖ TELLING TIME CORRECT TO THE NEAREST MINUTES-



The time taken by the minute hand to move from one number to another number is 5 minutes. To take one full round, the minute hand moves by 12 such numbers. So, the minute hand takes one round in 5 x 12 = 60 minutes.



Remember- 1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

1 hour = 3600 seconds

What is the time?

15 minutes after 2

2.15

two fifteen

mathella

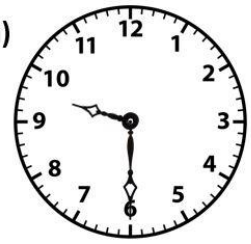
In the above figure the position of hour hand is nearest to two and the position of minute hand is on three. So as per the position of the minute hand, it is 3 x 5 =15 minutes. The time is here 2.15.

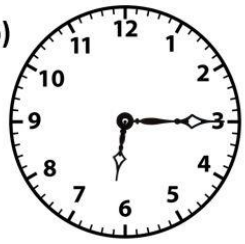
NOTE: 2.15 – 15 minutes past 2 or quarter past two

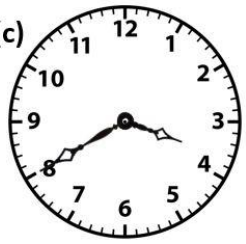
2.30 – 30 minutes past 2 or half past two

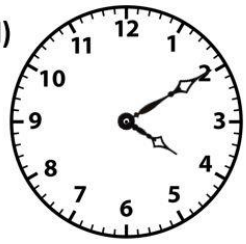
2.45 – 45 minutes past two or quarter two 3

Example : Look at the following clock and tell the time.

(a) 

(b) 

(c) 

(d) 

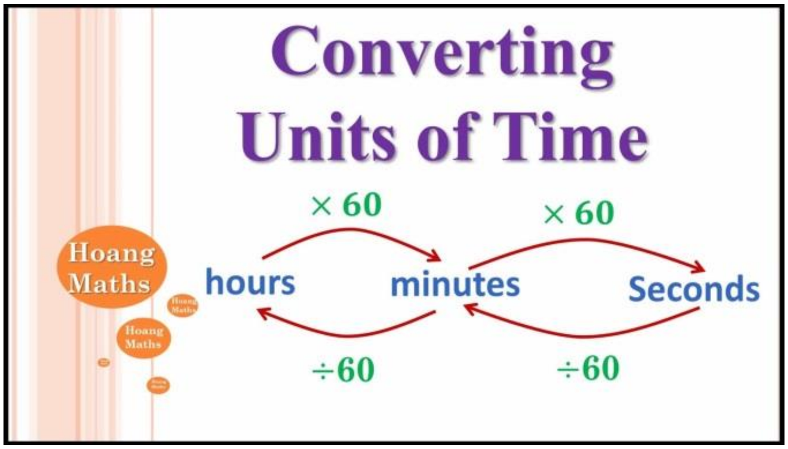
Position of the hour hand	Position of the minute hand	Number of minutes	Time	Method to tell the time
(a) Between 9 and 10	At 6	6 × 5 = 30	9 : 30	30 minutes past 9.
(b) Between 6 and 7	At 3	3 × 5 = 15	6 : 15	15 minutes past 6.
(c) Between 3 and 4	At 8	8 × 5 = 40	3 : 40	40 minutes past 3.
(d) Between 4 and 5	At 2	2 × 5 = 10	4 : 10	10 minutes past 4.

❖ CONVERSION OF TIME-

60 seconds = 1 minute

60 minutes = 1 hour

24 hours = 1 day



EXAMPLE-1

Convert 15 minutes 20 seconds into seconds.

SOLUTION-

1 minute = 60 sec.

15 minutes 20 sec. **= 15 x 60 + 20**

= 900 + 20

= 920 sec.

EXAMPLE-2

Convert 8 hours12 minutes into minutes.

SOLUTION-

1 hour = 60 minutes

8 hours 12 minutes **= 8 x 60 + 12**

= 492 minutes

EXAMPLE-3

Convert 125 seconds into minutes and seconds.

SOLUTION-

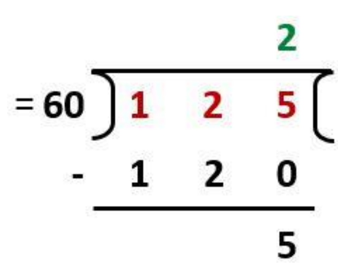
60 seconds = 1 minute

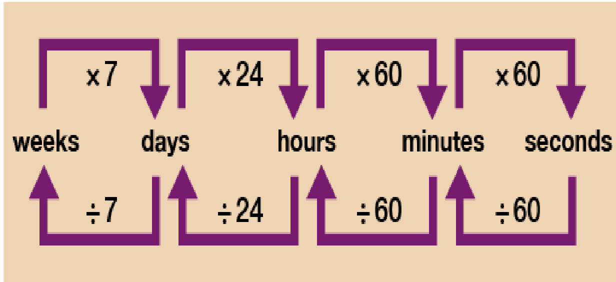
125 seconds = 125 ÷ 60

Here, the quotient 2 denotes the minutes and remainder

5 represents the seconds.

125 seconds = 2 minutes 5 seconds





EXAMPLE-4

Convert into hours.

(i) 7 days (ii) 2 days 8 hours

SOLUTION-

(i) 1 day = 24 hours

7 days = 7 x 24 = 168 hours

(ii) 1 day = 24 hours

2days 8 hours = 2 x24 + 8 = 56 hours

EXAMPLE-5

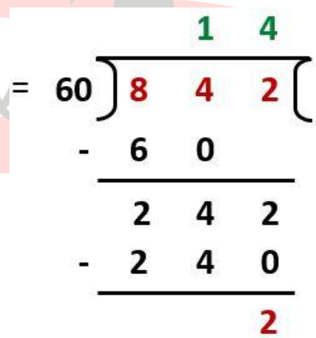
Convert 842 minutes into hours and minutes.

SOLUTION-

60 minutes = 1 hour

842 minutes = 842 ÷ 60

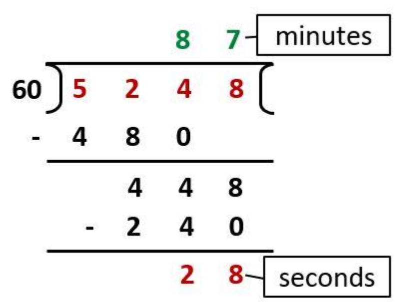
= 14 hours 2 minutes



EXAMPLE-6

Convert 5,248 seconds into hours, minutes and seconds.

SOLUTION-



Step – 1: First convert seconds into minutes.

60 seconds = 1 minute

5,248 seconds = 5,248 ÷ 60 minutes

= 87 minutes 28 seconds

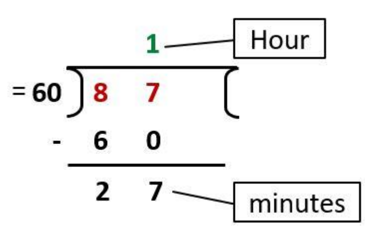
Step – 2: Now, convert 87 minutes into hours

(87 minutes is more than 60 minutes, we can convert it into hours and minutes.)

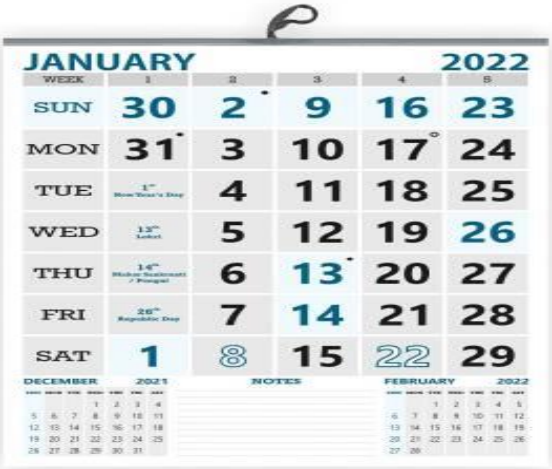
60 minutes = 1 hour

87 minutes = 87 ÷ 60 = 1 hour 27 minutes

= 1 hour 27 min 28 sec



❖ CALENDAR-



A calendar shows the dates, weeks and months of a particular year. It also gives information about holidays and festivals.

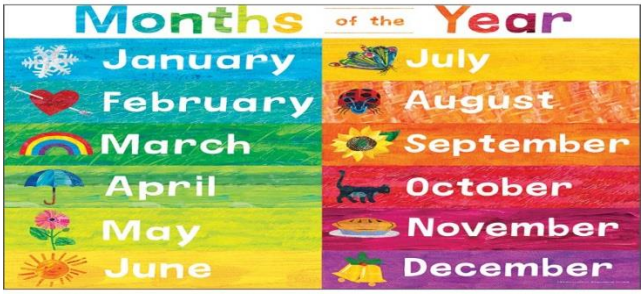
We know that 7 days = 1 week, 12 months = 1 year

WEEK-

A week contains 7 days.

MONTHS-

There are 12 months in a year and each month contains either 30 or 31 days. But the month of February contains either 28 days or 29 days.



The year in which February has 29 days is called a **leap year**.

Number of Days in Each Month

January	31 days	July	31 days
February	28/29 days	August	31 days
March	31 days	September	30 days
April	30 days	October	31 days
May	31 days	November	30 days
June	30 days	December	31 days

YEAR-

There are 365 days in a year and 366 days in a leap year.

LEAP YEAR-

A year which is exactly divisible by 4 is known as a leap year.

It comes once in every four years. The next leap year will be 2020.

EXAMPLE-1

Will 2036 be a leap year?

SOLUTION-

Let us divide 2036 by 4.

Since, 2036 is completely divisible by 4,

It is a leap year.

$$\begin{array}{r} 509 \\ 4\overline{)\,2036\,} \\ -20 \\ \hline 003 \\ -00 \\ \hline 036 \\ -36 \\ \hline 00 \end{array}$$

EXAMPLE-2

How many days are there from 5th April to 28th May?

SOLUTION-

Number of days in April = 30

Number of days from 5th April to 30th April = 30 – 5 = 25 days

Now, number of days from 5th April to 28th May = 25 + 28 = 53 days

EXAMPLE – 3

Look at the calendar given below. Answer the questions follow:

2017

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

a) Christmas is falling on what day?

Ans. Monday

b) What will be the date on the last Sunday of June?

Ans. The last Sunday will be 25th of June.

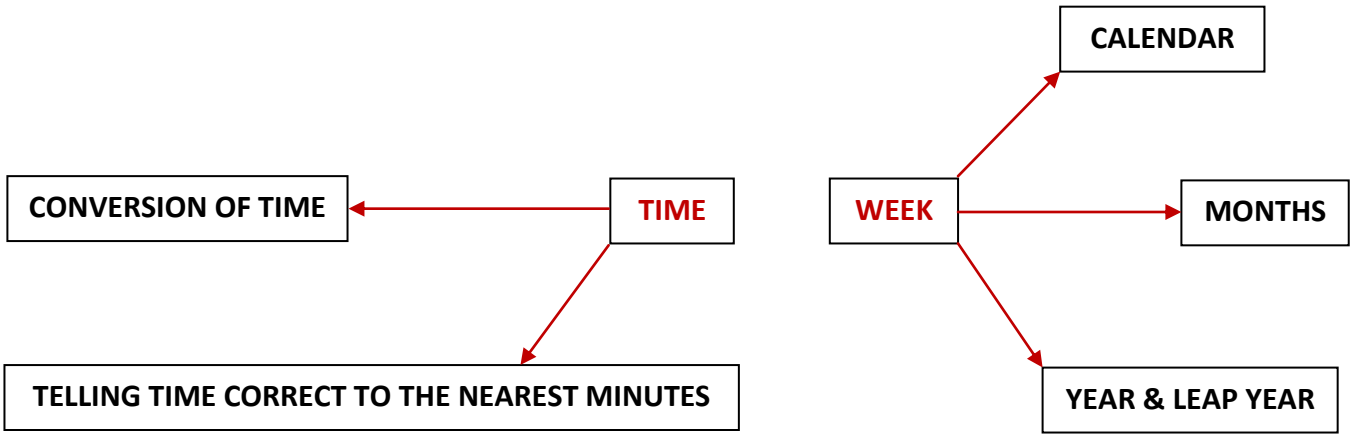
c) How many Fridays are there in the month of September?

Ans. There are 5 Fridays i.e. 1st, 8th, 15th, 22nd and 29th.

d) How many Saturdays and Sundays are there in the month of August?

Ans. 10

MIND MAP-



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