Government of Tamilnadu

STANDARD FOUR

TERM II

VOLUME 2

MATHEMATICS

SCIENCE

SOCIAL SCIENCE
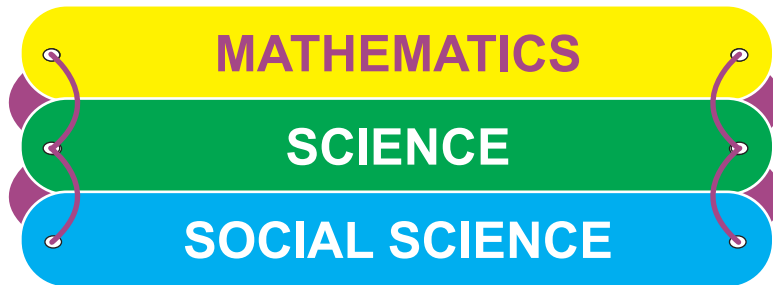
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Untouchability is Inhuman and a Crime

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Department of School Education

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STANDARD FOUR

Term II

What these Icons stand for!

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MEASURING CAPACITY

Reeta and her sister Geetha filled water in two buckets of same capacity. They used different measures of jars to fill.

Reeta filled the bucket by 10 jars of water.
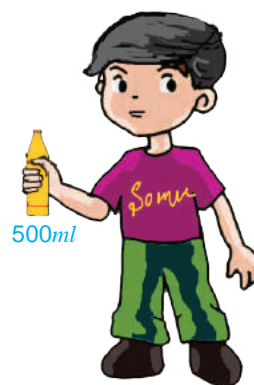
Geetha filled the bucket by 8 jars of water.

Measures cannot be accurate if we use non - standard measures.

Ramu and Somu went to a juice shop. They bought Orange juice and Mango juice.

Who has more juice?
Ramu has more juice.
Somu may have half of it.

$1l$

$500ml$

Millilitre and litre are the standard measures.

MATHEMATICS

Relation between litre and millilitre
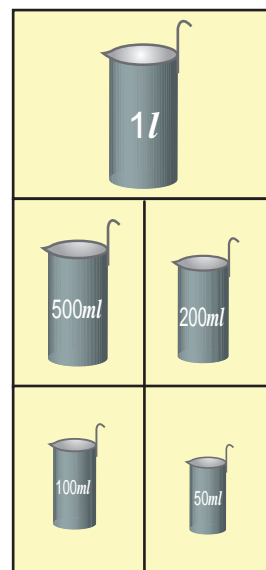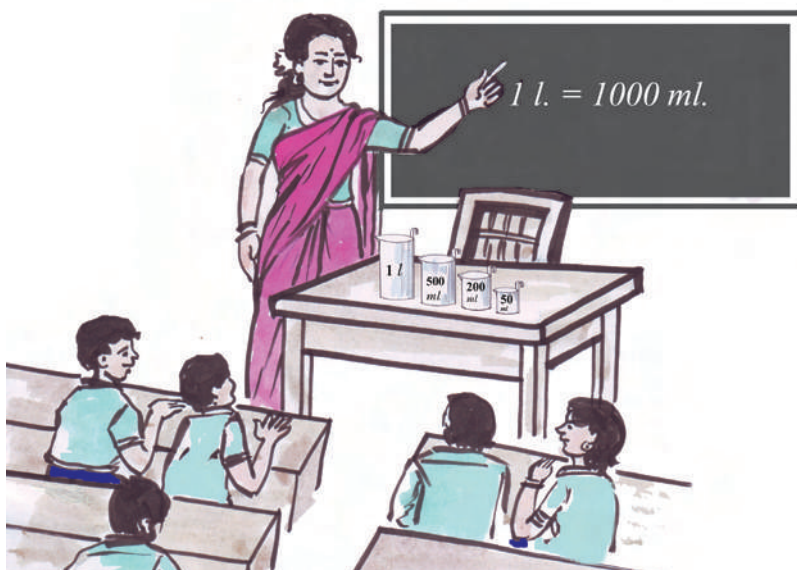
Teacher : Children, can you tell me where you have seen these objects?

Sankar : I have seen these containers in the fair price shop to measure oil.

John   : I have seen them with the milk man.

Teacher : Yes, You are both correct. These jars are used for measuring liquid. Can you tell me the units used for measuring liquids.

Mohan   : millilitre and litre

Teacher : Gopu, please take the 500 millilitre jar and use it to fill the one litre jar with the water. Then tell me how many times you had to use the 500 millilitre jar.

Gopu   : I had to fill it.

Teacher : We see that, we need two 500 millilitre jars of water to make one litre

500 millilitre + 500 millilitre = 1litre

1000 millilitre = 1 litre

we write '*ml*' for millilitre and '*l*' for litre

½ l = 500ml

¼ l = 250ml

¾ l = 750ml

Fill in the blanks :

1 *litre*

50 *ml*	500 *ml*	ml	100 *ml*
+	+	+	+
ml	200 *ml*	ml	ml
+	+	+	+
200 *ml*	ml		ml
+	+		+
ml	ml		200 *ml*
+			+
ml			500 *ml*
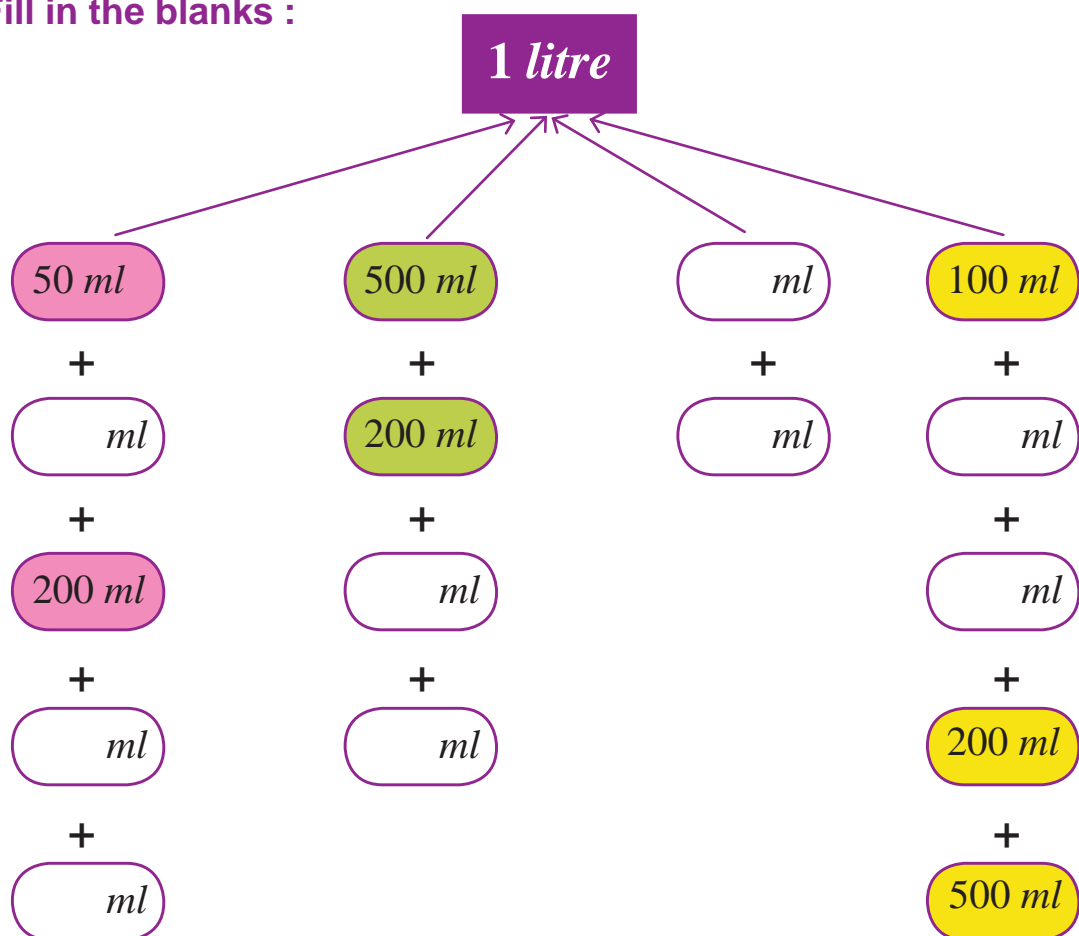
Water, water

The table shows the amount of water used in one day by Sriram's family of 3 persons.

Drinking	9 l
Cooking	12 l
Cleaning vessels	15 l
Bathing	30 l
Washing clothes	24 l
Other reasons	40 l
Total amount of water used for one day	_____ l

PROJECT

Find the amount of water used by your family in one day?

Name of the Student ....

Total number of persons in your family ....

Drinking	l
Cooking	l
Cleaning vessels	l
Bathing	l
Washing clothes	l
Other reasons	l
Total amount of water used in one day	l

Addition of litre and millilitre

- $2\,l + 450\,ml = 2000\,ml + 450\,ml = 2450\,ml$
- $3\,l + 75\,ml = 3000\,ml + 75\,ml = 3075\,ml$
- $4\,l + 5\,ml = 4000\,ml + 5\,ml = 4005\,ml$

Practice

(1) Fill in the missing boxes.

1) $1\,l$ =	1000 ml	
2) $2\,l$ =	ml	
3) $6\,l$ =	ml	
4) $5\,l$ =	ml	

5) $7000\,ml$ =	l	
6) $4000\,ml$ =	l	
7) $9000\,ml$ =	l	
8) $3000\,ml$ =	l	

9) $3\,l + 475\,ml$ = ☐ ml + ☐ ml = ☐ ml

10) $5\,l + 60\,ml$ = ☐ ml + ☐ ml = ☐ ml

11) $7\,l + 5\,ml$ = ☐ ml + ☐ ml = ☐ ml

(2) Write the correct matches of A from B.

A	B
$1l\ 250ml$	
$1l\ 25ml$	
$1l\ 5ml$	
$1l\ 750ml$	
$1l\ 705ml$	

B
$1750\,ml$
$1250\,ml$
$1705\,ml$
$1005\,ml$
$1025\,ml$

Fill in the boxes using 500 _ml_, 200 _ml_, 100 _ml_, 50 _ml_.

500 _ml_	☐ + ☐ + ☐				
500 _ml_	100 _ml_ + 100 _ml_ + 100 _ml_ + 100 _ml_ + 100 _ml_				
700 _ml_	☐ + ☐ + ☐ + ☐				
200 _ml_	☐ + ☐ + ☐				
300 _ml_	☐ + ☐ + ☐ + ☐				
200 _ml_	☐ + ☐ + ☐ + ☐				
250 _ml_	☐ + ☐				
350 _ml_	☐ + ☐ + ☐				
450 _ml_	☐ + ☐ + ☐ + ☐				
600 _ml_	☐ + ☐				
1_l_	☐ + ☐ + ☐ + ☐				

MATHEMATICS

Addition in capacity

Add.

$25l\ 500ml\ +\ 13l\ 225ml$

l	ml
25	500
+ 13	225
38	725

Step 1 : Add millilitres.
Step 2 : Add litres.

Practice

1)

l	ml
50	100
+ 29	350

2)

l	ml
15	175
+ 13	225

3)

l	ml
22	327
+ 13	256

4)

l	ml
16	200
15	150
+ 17	300

5)

l	ml
7	050
12	200
+ 23	500

6)

l	ml
43	000
14	500
+ 26	250

7)

l	ml
18	306
16	054
+ 14	252

8)

l	ml
37	150
2	221
+ 44	578

9)

l	ml
3	075
19	529
+ 21	275

Life related problems

Shall we prepare a cold drink? it is very hot today.

The ingredients are given below.

1l sharbath	200ml lemon juice	2l 500ml cold water
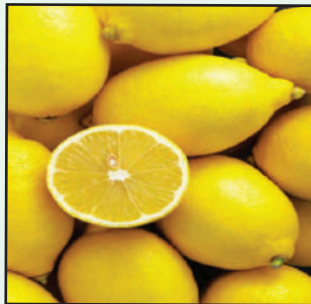
		l	ml
Cold water	=	2	500
Sharbath	=	1	000
Lemon Juice	=	0	200
Total	=	3	700

Total quantity of the cold drink = 3l 700ml

Practice

1) These are three vessels with milk.

1	2	3
17l 300ml	2l 100ml	5l 200ml

★ Which vessel has more milk?

★ Which has less milk?

★ Find the total amount of milk in the three vessels.

2) The amount of milk given by a cow in three days is given below.

	l	ml
Day 1	13	500
Day 2	14	200
Day 3	12	100

Find the total milk given by the cow in three days.

3) Bama has $2l$ of buttermilk which is very sour in taste. So she add $500ml$ of water. What is the amount of buttermilk after the addition of water?

4) Jayanthi buys $1l$ of idly mix. To make dosa she adds $200ml$ of water. Find the total amount of dosa mix?

5) $200ml$ of coconut oil, $300ml$ of sesame oil and $100ml$ of castor oil are mixed to light a lamp. Calculate the total quantity of the oil mixture?

6) $50ml$ of red, $100ml$ of green and $500ml$ of white paint are mixed together. Find the total quantity of paint obtained.

7) The water used to prepare food items at a function are given below.

Food item	Quantity of water	
	l	ml
Rice	25	200
Rasam	15	150
Butter milk	10	500
Padam kheer	5	50

★ Find the total quantity of water to prepare rice and rasam.

★ How much quantity of water is needed to prepare buttermilk and padam kheer?

★ Find the total quantity of water required to prepare all food items.

Subtraction in capacity

Subtract.

$15l\ 350ml - 13l\ 225ml$

l	ml
15	350
− 13	225
2	125

Step 1 : Subtract $225ml$ from $350ml$.

Step 2 : Subtract $13l$ from $15l$.

Life related problem

Find the quantity of water used for soaking the clothes.

Water in a pot   The clothes are soaked.   Remaining water

20l 11l

The quantity of water	=	20 l
Remaining water	=	− 11 l
Water used for soaking the clothes	=	9 l

Practice

1)

l	ml
27	875
− 18	618

2)

l	ml
35	950
− 23	286

3)

l	ml
56	357
− 15	238

4) Find the remaining mango juice when 200 ml is taken from 1 l 500 ml of mango juice.

l	ml
1	500
− 0	200

Remaining mango juice = _____

5) Raja and his friends went to an oil shop. The quantity of oil bought by them are given below.

S. No	Name	Sun flower oil		Groundnut oil		Gingelly oil		Mustard oil		Coconut oil	
		l	ml	l	ml	l	ml	l	ml	l	ml
1	Raja	5	000	1	300	3	000	0	100	0	050
2	Elizabeth	8	100	0	250	1	100	0	300	0	100
3	Nithish	1	200	0	050	0	250	4	150	2	000
4	Revathi	4	150	3	100	2	600	0	050	--	
5	Rajeswari	2	250	4	050	4	050	0	200	0	400

⇨ Find the total quantity of oil bought by Elizabeth.

⇨ Calculate the total quantity of sunflower oil bought from the shop?

⇨ Who bought more mustard oil?

⇨ Which oil was bought most?

⇨ How much more groundnut oil did Raja buy than Nithish?

Fill in the table.

S. No	Things	Number of times	Approximate value in l or ml	Correct value in l or ml
1.		20		
2.		5		
3.		3		
4.		1		
5.		2		
6.		1		
7.		20		
8.		1		
9.		4		

MATHEMATICS

Fill in the blanks.

1) $7l + 500ml$ = _____ ml

2) $4l + 65ml$ = _____ ml

3) $8l + 5ml$ = _____ ml

4) $4l\ 890ml$ = _____ ml

5) $6l\ 856ml$ = _____ l + _____ ml

6) $3l\ 567ml$ = _____ l + _____ ml

7) $4l\ 890ml$ = _____ l + _____ ml

Do the sums.

1)

l	ml
7	075
+ 75	354

2)

l	ml
16	305
73	355
+ 55	089

3)

l	ml
27	005
86	290
+ 73	605

4)

l	ml
82	235
− 28	150

5)

l	ml
73	589
− 65	254

6)

l	ml
98	439
− 39	315

7) A drum contains $54l\ 250ml$ of varnish and another drum contains $75l\ 650ml$. What is the total capacity?

8) A bucket contains $15l\ 20ml$ water and another bucket contains $12l\ 300ml$. What is the total quantity?

9) A curd vendor has $89l\ 500ml$ of curd. If he sells $39l\ 250ml$, how much is left with him?

MATHEMATICS

2 MULTIPLICATION AND DIVISION

MULTIPLICATION

In a World Cup Cricket Match, 2007, Yuvaraj Singh hit each ball for a six runs in the over.

Shall we calculate the runs taken by him in the over?

Number of runs taken in

one	ball	=	6	= 1×6 = 6
two	balls	=	6 + 6	= 2×6 = 12
three	balls	=	6 + 6 + 6	= 3×6 = 18
four	balls	=	6 + 6 + 6 + 6	= 4×6 = 24
five	balls	=	6 + 6 + 6 + 6 + 6	= 5×6 = 30
six	balls (one over)	=	6 + 6 + 6 + 6 + 6 + 6	= 6×6 = 36

Multiplication is the short form of repeated addition

6th table

$1 \times 6 = 6$
$2 \times 6 = 12$
$3 \times 6 = 18$
$4 \times 6 = 24$
$5 \times 6 = 30$

$6 \times 6 = 36$
$7 \times 6 = 42$
$8 \times 6 = 48$
$9 \times 6 = 54$
$10 \times 6 = 60$

6 notebooks are needed for one student. How many notebooks will be needed for 7 students?

Solution:

To find the total notebooks we have to multiply 7 by 6. $7 \times 6 = 42$

42 notebooks will be needed for 7 students

MATHEMATICS

1) 3 × 6 = ⬭   2) 4 × 6 = ⬭   3) 5 × 6 = ⬭

4) If a shirt has 6 buttons, how many buttons will be in 8 shirts?

5) Find the number of fans in 9 houses if each house has 6 fans.

Complete the 7 table
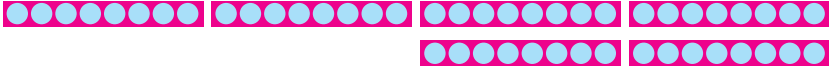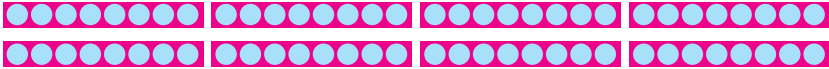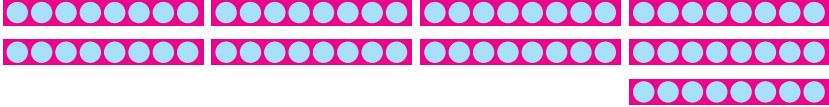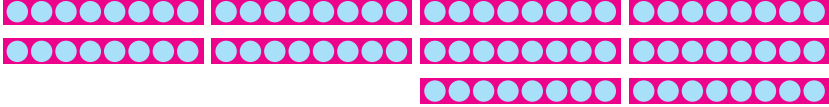
Flower has 7 petals.	✹	1 × 7 = 7
	✹✹	2 × 7 = 14
	✹✹✹	3 × 7 = 21
	✹✹✹✹	
	✹✹✹✹✹	
	✹✹✹✹✹✹	6 × 7 = 42
	✹✹✹✹✹✹✹	
	✹✹✹✹✹✹✹✹	8 × 7 = 56
	✹✹✹✹✹✹✹✹✹	
	✹✹✹✹✹✹✹✹✹✹	10 × 7 =70

Practice

1) 4 × 7 = ⬭   2) 7 × 7 = ⬭   3) 9 × 7 = ⬭

4) A box contains 7 pencils. How many pencils are there in 5 boxes?

5) One week has 7 days. Calculate the numbers of days in 8 weeks.

MATHEMATICS

Complete the 8 table

●●●●●●●●	1 × 8 = 8
●●●●●●●● ●●●●●●●●	2 × 8 = 16
●●●●●●●● ●●●●●●●● ●●●●●●●●	3 × 8 = 24
●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●●	
●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●●	5 × 8 = 40
●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●●	
●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●●	7 × 8 = 56
●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●● ●●●●●●●●	
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Practice

1) 4 × 8 = ⬭

2) 6 × 8 = ⬭

3) 9 × 8 = ⬭

4) Number of rods in a window is 8. Find the number of rods in 8 windows.

5) Find the number of pillars for 7 buildings if each building has 8 pillars.

Complete the 9 table.

9	= 1 × 9 = 9
9 + 9	= 2 × 9 = 18
9 + 9 + 9	= _____
9 + 9 + 9 + 9	= 4 × 9 = 36
9 + 9 + 9 + 9 + 9	= _____
9 + 9 + 9 + 9 + 9 + 9	= 6 × 9 = 54
9 + 9 + 9 + 9 + 9 + 9 + 9	= _____
9 + 9 + 9 + 9 + 9 + 9 + 9 + 9	= 8 × 9 = 72
9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9	= _____
9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9	= 10 × 9 = 90

Practice

1) 4 × 9 = ( ) 2) 7 × 9 = ( ) 3) 8 × 9 = ( )

4) A Kho - Kho team has 9 persons. How many persons are there in 6 teams?

5) Number of idlies that can be prepared in one one idly plate is 9. How many idlies can be prepared in 9 idly plates?

Complete the 10 table.

From the tables 1 to 9 we know the following.   Change to 10 table.

10 × 1 = 10	1 × 10 = 10
10 × 2 = 20	2 × 10 = 20
10 × 3 = 30	_____
10 × 4 = 40	_____
10 × 5 = 50	_____
10 × 6 = 60	_____
10 × 7 = 70	_____
10 × 8 = 80	_____
10 × 9 = 90	10 × 10 = 100

MATHEMATICS

Multiplication by 10, 100, 1000

Fill in the boxes

1)   5 × 10 = ⟨ 50 ⟩   6) 40 × 100 = ⟨   ⟩

2) 60 × 10 = ⟨   ⟩   7) 66 × 100 = ⟨   ⟩

3) 705 × 10 = ⟨   ⟩   8)   3 × 1000 = ⟨ 3000 ⟩

4) 500 × 10 = ⟨   ⟩   9)   8 × 1000 = ⟨   ⟩

5)   7 × 100 = ⟨ 700 ⟩   10)   9 × 1000 = ⟨   ⟩

When a number is multiplied by 10, 100, 1000, it is enough to write one zero, two zeros, three zeros respectively after that number.

Multiplication by 1

$$5 \times 1 = 5$$
$$48 \times 1 = 48$$
$$760 \times 1 = 760$$

The product of one and any number is the number itself.

Multiplication by 0

$$7 \times 0 = 0$$
$$50 \times 0 = 0$$
$$384 \times 0 = 0$$

The product of zero and any number is zero.

Order of multiplication

$$1 \times 2 = 2 \times 1$$
$$27 \times 5 = 5 \times 27$$
$$768 \times 4 = 4 \times 768$$

The product of two numbers does not change, if we interchange the order of numbers.

Fill in the blanks.

7 × 8 = 56 = 8 × 7	7 × 6 = ____ = 6 × 7
5 × 9 = 45 = 9 × 5	____ = 72 = 8 × 9
10 × 7 = 70 = 7 × 10	9 × 9 = 81 = ____

Multiplication - Easy methods

Multiplication by 30, 50 ... etc.

1.　**Multiply 245 by 30**

$$245 \times 30 = 245 \times (3 \times 10)$$
$$= (245 \times 3) \times 10$$
$$= 735 \times 10$$
$$= 7350$$
$$245 \times 30 = 7350$$

```
245 |
 x 3| 0
-----
735  0
```

2.　**Multiply 36 by 50**

$$36 \times 50 = 36 \times (5 \times 10)$$
$$= (36 \times 5) \times 10$$
$$= 180 \times 10$$
$$= 1800$$

```
36  |
x 5 | 0
-----
180  0
```

> To multiply by a number 30, 50. etc first multiply the number by the non - zero digit of the multiplier and put as many zeros as there are in the multiplier to the right of the result.

Multiply

1.　27 x 40	2. 34 x 80	3. 65 x 90
4.　452 x 70	5. 535 x 60	6. 791 x 20

Srinath arranged 20 chocolates in the following ways.

$10 \times 2 = 20$

$2 \times 10 = 20$

$5 \times 4 = 20$

$4 \times 5 = 20$
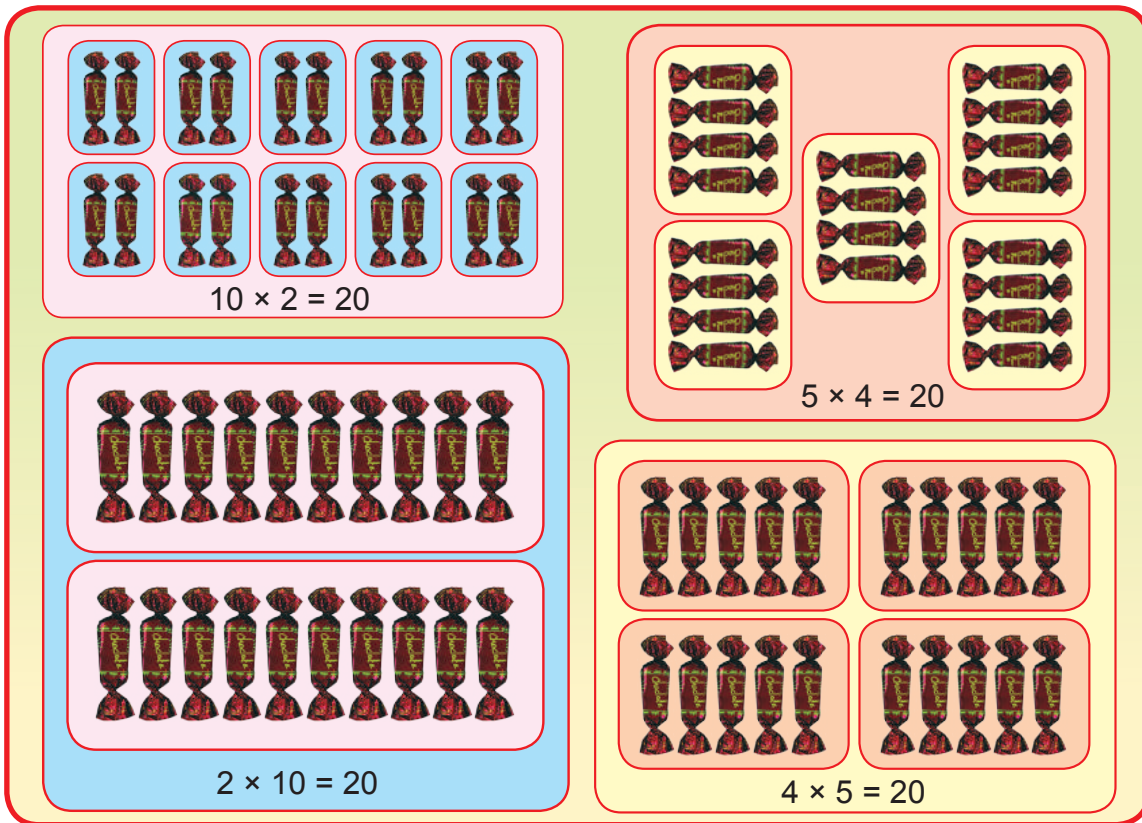
Practice

Complete the chart for the following numbers.

1)

8×3		3×8
	24	
6×4		4×6

2)

	12	

3)

	20	

4)

	18	
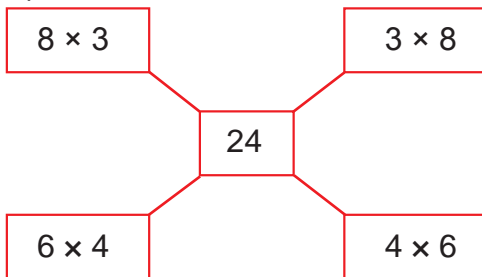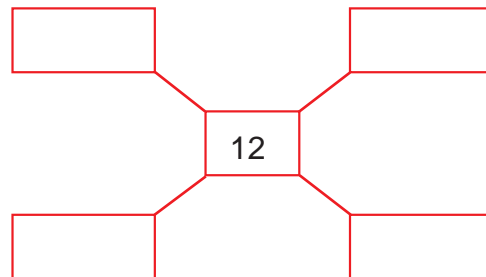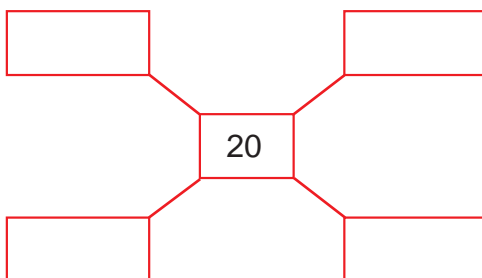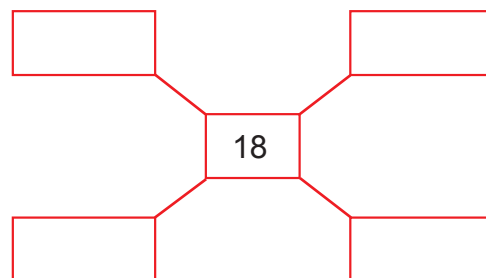
Multiplication of two digit numbers by one digit number

If one class has 34 students, find the number of students in 6 classes.

Solution: Number of students in one class   = 34

Number of students in 6 classes   = 34 × 6

H	T	O
	②	
	3	4
	×	6
		4

Step 1:

4 × 6 = 24 ones

Write 4 in the 'ones' place

and carry ② to the 'tens' place.

H	T	O
	②	
	3	4
	×	6
2	0	4

Step 2:

3 × 6 = 18 tens

Add 18 tens and ② tens.

18 + ② = 20

Write 0 in tens place and

 2   in hundreds place.

Number of students in 6 classes   = 204

MATHEMATICS

Multiplication of 3 digit numbers by one digit number

The cost of a rice bag is ₹ 436. Find the cost of 7 rice bags.

Solution:

Cost of a rice bag = ₹ 436

Cost of 7 rice bags = ₹ 436 × 7

Th	H	T	O
	②	④	
	4	3	6
		×	7
3	0	5	2
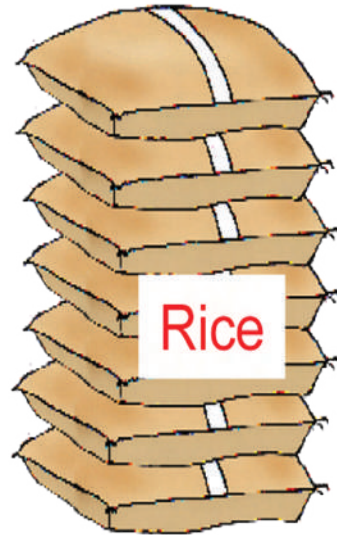
Steps :

★ 6 × 7 = 42

   write 2 in ones place and carry 4 to tens place

★ 3 × 7 = 21,   21 + 4 = 25

   write 5 in tens place and carry 2 to hundreds place

★ 4 × 7 = 28,   28 + 2 = 30

   write 0 in hundreds place and 3 in thousands place.

Cost of 7 rice bags = ₹ 3052

MATHEMATICS

1) 67 × 6   2) 95 × 5   3) 47 × 8   4) 87 × 5
5) 897 × 6   6) 725 × 7   7) 506 × 7   8) 923 × 8
9) 666 × 8   10) 460 × 9 11) 292 × 5 12) 788 × 9

13) A pearl necklace has 52 pearls. How many pearls are there in 7 necklaces?

14) Number of roses needed for a garland is 72.
    Calculate the number of roses needed for 9 garlands.

15) 485 sugarcane bundles are loaded in a cart. How many bundles are loaded in 7 carts?

16) The cost of an iron box is ₹ 565. Find the cost of 8 iron boxes.

Multiplication of two digit numbers by two digit numbers

A box contains 48 apples. How many apples are there in 56 boxes?

Solution: Number of apples in a box   = 48
                Number of apples in 56 boxes   = 48 × 56

> We can write 56 = 50 + 6

Th	H	T	O
		4	8
	×	5	6
	2	8	8
2	4	0	0
2	6	8	8

Step 1
  4 8
× 6 ones
_____
2 88 ones

Step 2
  4 8
× 5 0 ones
_____
2 4 0 0 ones

Step 3
  2 8 8
+ 2 4 0 0
_____
  2 6 8 8

> **Number of apples in 56 boxes = 2688**

Another way

Th	H	T	O
	④	④	
		4	8
	×	5	6
	2	8	8
2	4	0	0
2	6	8	8

Step 1

Multiply ones by ones

8 × 6 = ④8

Multiply tens by ones

4 × 6 =   24

24 + ④ =   28

48 × 6 = 288

Step 2

Multiply ones by tens

8 × 5 =   ④0

Multiply tens by tens

4 × 5 =   20

20 + ④ =   24

48 × 5 = 2400

Step 3 288 + 2400 = 2688

Number of apples in 56 boxes = 2688.

Practice

1) 59 × 43   2) 58 × 56   3) 95 × 60   4) 78 × 66   5) 38 × 71

6) 92 × 76   7) 60 × 88   8) 54 × 90   9) 70 × 92   10) 65 × 98

11) In a marriage hall 28 persons are seated in a row. How many persons are seated in 36 rows?

12) Bus fare for a person from Tambaram to Cuddalore is ₹ 93. Find the bus fare for 43 persons.

13) A Mini van is loaded with 44 onion bags. How many onion bags are loaded in 37 Mini vans?

14) One quire of paper contains 24 sheets. How many sheets are there in 36 quires?

15) How many hours are there in the month of July?

Puzzle

I am a two digit number. I lie in between 40 and 50.
I am an even number. I appear in sixth and seventh
multiplication table. Who am I?

DIVISION

Sharing

There are 20, 21, 22, 23, 24 and 25 pomegranates in each box. In how many rows they can be arranged if each row has 5 pomegranates?

4 rows and remainder 0

4 rows and remainder 1

4 rows and remainder 2

4 rows and remainder 3

4 rows and remainder 4

5 rows and remainder 0
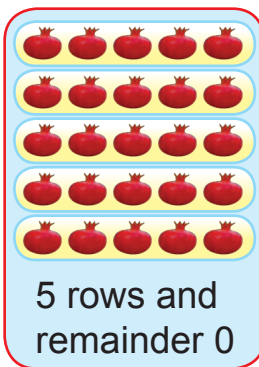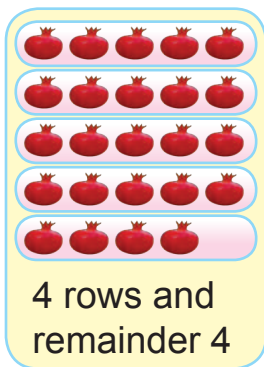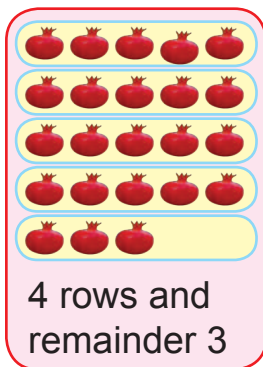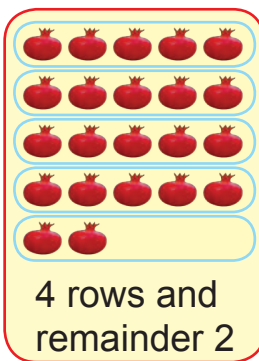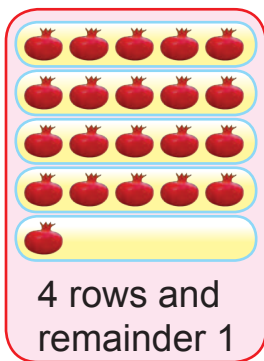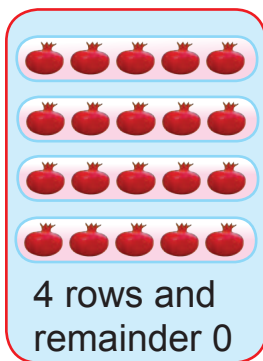
Arrange in groups

If 42 students are to be grouped equally into 3 teams, how many students will be there in each team?

Divide : 42 ÷ 3

42 = 30 + 12
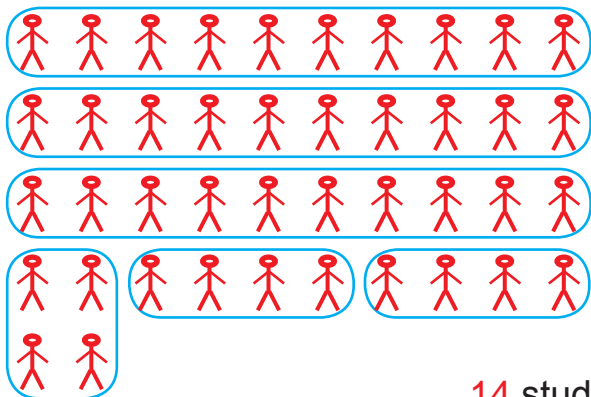
$$\begin{array}{r} 10 + 4 \ \ = 14 \\ 3\,\overline{\smash)\,30 + 12} \\ 30 + 12 \\ \hline 0 \end{array}$$

Quotient = 14
Remainder = 0

14 students will be there in each team.

Division of three digit number by a one digit number

Division without remainder

Divide 875 by 7

```
      1 2 5
   7 | 8 7 5
       7↓
       1 7
       1 4↓
         3 5
         3 5
           0
```

Step 1 : Take 8 hundreds. Divide 8 by 7.

Quotient =1 and remainder = 1

Step 2 : Take 17 tens

Divide 17 by 7. Quotient = 2 and

remainder = 3

Step 3 : Take 35 ones

Divide 35 by 7. Quotient = 5 and

remainder = 0

875 ÷ 7 = 125

Quotient = 125,   Remainder = 0

Find the number of plates that are distributed equally to 9 hostels if the total number of plates are 963.

Solution : Total numbers of plates distributed = 963

Number of hostels   = 9

Number of plates distributed to each hostel = 963 ÷ 9

```
      1 0 7
   9 | 9 6 3
       9↓↓ ↓
         6 3
         6 3
           0
```

Step 1 :   Take 9 hundreds.

9 ÷ 9 = 1.

Step 2 :   Take 6 tens.

6 cannot be divided by 9.

So, put 0 tens in quotient's place.

Now take 63 ones.

63 ÷ 9 = 7, remainder 0.

107 plates are distributed to each hostel

Division with remainder

Divide 657 by 8

```
      8 2
  8 | 6 5 7
      6 4↓
    ─────────
      1 7
      1 6
    ─────────
        1
```

Step 1 : Take 6 hundreds. 6 cannot be divided by 8. So take 65 tens. Divide 65 by 8. Quotient = 8 and remainder = 1

Step 2 : Take 17 ones. Divide 17 by 8. Quotient = 2 and remainder = 1

Quotient = **82**   Remainder = **1**

Practice

1) 575 ÷ 5   2) 336 ÷ 6   3) 456 ÷ 8   4) 658 ÷ 7

5) 807 ÷ 6   6) 690 ÷ 7   7) 981 ÷ 8   8) 829 ÷ 9

9) An electrician fixed 4 bulbs in a room. In how many rooms can 216 bulbs be fixed by him?

10) 9 saplings are planted in a row. In how many rows are 873 saplings planted?

Division of 4 digit number by one digit number

Division without remainder

Divide 7847 by 7

   Step 1 : Take 7 thousands. Divide 7 by 7.
   Quotient = 1 and remainder = 0

   Step 2 : Take 8 hundreds. Divide 8 by 7.
   Quotient = 1 and remainder = 1

   Step 3 : Take 14 tens. Divide 14 by 7.
   Quotient = 2 and remainder = 0

   Step 4 : Take 7 ones. Divide 7 by 7.
   Quotient =1 and remainder = 0

Quotient = 1121, Remainder = 0

```
          1 1 2 1
      7 | 7 8 4 7
          7↓
        ───────────
          8
          7↓
        ───────────
          1 4
          1 4↓
        ───────────
              7
              7
        ───────────
              0
```

8 children collected 4904 shells from the sea shore. If the shells are equally shared, how many shells will each one get?

Solution :

Total number of shells	= 4 9 0 4
Number of children	= 8

Number of shells for each child = 4 9 0 4 ÷ 8

```
      6 1 3
   ┌─────────
 8 │ 4 9 0 4
   │ 4 8↓
   │ ────
   │   1 0
   │     8↓
   │   ────
   │     2 4
   │     2 4
   │   ────
   │       0
```

Step 1 : Take 4 thousands. 4 cannot be divided by 8. So take 49 hundreds. Divide 49 by 8. Quotient = 6 and remainder =1

Step 2 : Take 10 tens. Divide 10 by 8. Quotient = 1 and remainder = 2.

Step 3 : Take 24 ones. Divide 24 by 8. Quotient =3 and remainder = 0.

Each child will get **613** shells.

Division with remainder

Divide 7004 by 6

Step 1 : Take 7 thousands. Divide 7 by 6.
Quotient = 1 and remainder = 1.

Step 2 : Take 10 hundreds. Divide 10 by 6.
Quotient = 1 and remainder = 4

Step 3 : Take 40 tens. Divide 40 by 6.
Quotient = 6 and remainder = 4

Step 4 : Take 44 ones. Divide 44 by 6.
Quotient = 7 and remainder = 2.

```
        1 1 6 7
     ┌─────────
   6 │ 7 0 0 4
     │ 6↓
     │ ──
     │ 1 0
     │   6↓
     │ ────
     │   4 0
     │   3 6↓
     │   ────
     │     4 4
     │     4 2
     │   ────
     │       2
```

Quotient = 1167
Remainder = 2

Check : 1167 × 6 = 7002
adding the remainder 2
7002 + 2 = 7004

Divide 9805 by 8

```
      1 2 2 5
   8 | 9 8 0 5
       8 ↓
       1 8
       1 6 ↓
         2 0
         1 6 ↓
           4 5
           4 0
             5
```

1 x 8 = 8
2 x 8 = 16
2 x 8 = 16
5 x 8 = 40

Quotient = 1225
Remainder = 5

Divide 5567 by 9

```
       6 1 8
   9 | 5 5 6 7
       5 4 ↓
       1 6
         9 ↓
         7 7
         7 2
           5
```

6 x 9 = 54
1 x 9 = 9
8 x 9 = 72

Quotient = 618
Remainder = 5

Practice

1) 5232 ÷ 6   2) 8540 ÷ 7   3) 4624 ÷ 8   4) 2340 ÷ 9

5) 8348 ÷ 6   6) 6205 ÷ 7   7) 3426 ÷ 8   8) 3352 ÷ 9

9) 6 students can be seated in a bench. How many benches are required for 6264 students?

10) A six storey building has 2292 rooms. If every floor has the same number of rooms, how many rooms are there on each floor?

11) 7 containers have 7630 mugs of water. How many mugs of water are there in one container?

Observe and fill in the blanks.

42 ÷ 6 = 7	56 ÷ 7 = _____	81 ÷ 9 = _____
420 ÷ 6 = 70	560 ÷ 7 = _____	810 ÷ 9 = _____
4200 ÷ 6 = 700	5600 ÷ 7 = _____	8100 ÷ 9 = _____

Observe the following pictures and frame problems

Bus fare for one person is ₹ 96. Find the fare for 5 persons.

Vegetable and Fruit stall

Onion	1kg	₹ 15
Potato	1kg	₹ 25
Tomato	1kg	₹ 12
Drumstick	1kg	₹ 30
Apple	1kg	₹ 80
Banana	1	₹ 3

Problems

1.

2.

3.

4.

Problem

Total cost ₹ 132

Cost of 6 soap cakes are ₹ 132. What is the cost of a soap cake?

Problem

Total cost ₹ 88

Problem

Total cost ₹ 500

Estimation in multiplication

A tourism company collected ₹ 85 per head for a field trip. Estimate the amount collected from 27 persons.

		Actual amount	Estimated amount
Amount per head	=	₹ 85	₹ 90
Amount for 27 persons	=	₹ 85 × 27 595 170	₹ 90 × 30 00 270
Amount for 27 persons	=	₹ 2295	₹ 2700

Difference between
estimated amount and actual amount = ₹ 2700 − ₹ 2295
Difference = ₹ 405

Practice

A person delivers 92 newspapers in a day. Estimate the number of newspapers that he delivers in 28 days?

Estimate and calculate.

Numbers	Actual value	Estimated value	Difference
45 × 12	540	50 × 10 = 500	40
92 × 18			
26 × 22			
33 × 37			

Multiply.

1) 62×4 2) 35×7 3) 42×6

4) 89×8 5) 360×5 6) 402×6

7) 237×8 8) 685×9 9) 40×27

10) 30×70 11) 81×44 12) 92×53

13) The cost of a toothpaste packet is ₹ 26. Find the cost of 48 tooth paste packets?

14) A lorry is loaded with 6 cars. How many cars can be loaded in 450 lorries?

Divide.

1) $72 \div 4$ 2) $80 \div 5$ 3) $98 \div 6$

4) $88 \div 8$ 5) $654 \div 5$ 6) $342 \div 6$

7) $530 \div 7$ 8) $632 \div 8$ 9) $458 \div 9$

10) $8505 \div 5$ 11) $5437 \div 6$ 12) $6027 \div 7$

13) If 6 notebooks have 9120 lines, how many lines are there in a notebook?

14) If 9 ice cream cups are placed in a tray, how many trays are needed for 504 ice cream cups?

15) Find the quotient and remainder for the following divisions.

     1. $2519 \div 1$ 2. $2519 \div 2$ 3. $2519 \div 3$

     4. $2519 \div 4$ 5. $2519 \div 5$ 6. $2519 \div 6$

     7. $2519 \div 7$ 8. $2519 \div 8$ 9. $2519 \div 9$

3 CALCULATING TIME

Two friends studying in different schools are conversing with each other.

At what time does your school start?

My school starts at 9 o' clock. What about you?

My school starts at 9:10. How do you know what time it is?

I look the wall clock.

I use my wrist watch.

My grandfather looks at the sun and tells the time.

Look at the clock. It has two hands. One is long and the other one is short.

Yes, the long hand shows the minute and the short hand shows the hour.

What is the time now?

It is 3 o' clock because the minute hand is at 12 and the hour hand is at 3.
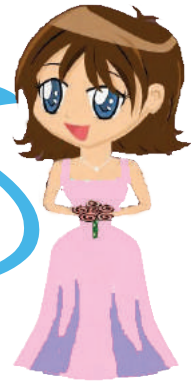
Hour and minute are standard units for calculating time.

Practice

Look at the clock and write the time.

1) ____ o' clock

2) ____ o' clock

3) ____ o' clock

4) ____ o' clock

5) ____ o' clock

6) ____ o' clock
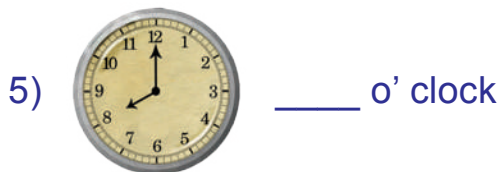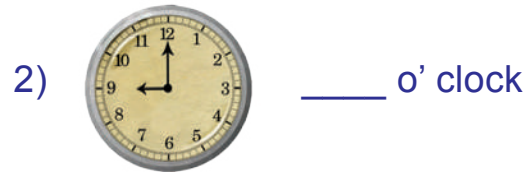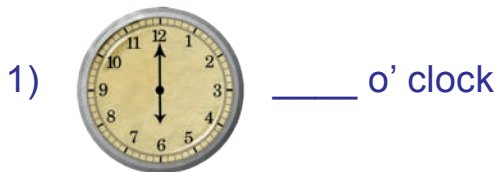
Hours and minutes

Look at the clock. The minute hand is at 1 and the hour hand is at 3.

Yes, now the time is 5 minutes past 3 or three-five or 3:05.

Look at the clock. The minute hand is at 2 and the hour hand lies between 3 and 4. Is it 10 minutes past 3?

Yes, we write it as three - ten or 10 minutes past 3 or 3:10

Can you help me to read the clock?

Oh, sure! look here.

Quarter of an hour $= \frac{1}{4}$ hour = 15 minutes

Half of an hour $= \frac{1}{2}$ hour = 30 minutes

Three - quarter of an hour $= \frac{3}{4}$ hour = 45 minutes

When the minute hand shows 3, the time is 15 minutes past 3 or quarter past 3 or three - fifteen. It is written as **3:15.**

When the minute hand shows 6, the time is 30 minutes past 3 or half past 3 or three - thirty. It is written as **3:30.**

When the minute hand shows 9, the time is 45 minutes past three or 15 minutes to four or three - forty five. It is written as **3:45.**

When the minute hand moves from one number to the next number, it means 5 minutes have passed.
Minute hand takes 60 minutes to complete one rotation. That is one hour. **So, 1 hour = 60 minutes.**

Practice

See the clock and write the time.

| 1:20 | | | |

Fill in the blanks to show your daily activities. Draw the hour and minute hands on the clock faces.

1) I get up at 6 o' clock
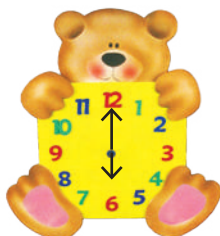
2) I take bath at _____

3) My break fast time is _____

4) I go to school at _____

5) My lunch time is _____

6) My school gets over at _____

7) My evening play time is _____

8) My study time is _____

MATHEMATICS

Time with a.m and p.m

In the above pictures both the clock shows 6 o'clock only.

One clock shows 6 o' clock in the morning and the other clock shows 6 o' clock in the evening.

6 o' clock in the morning is 6 anti meridian.

6 o' clock in the evening is 6 post meridian.

We can write anti meridian as a.m.
and post meridian as p.m.
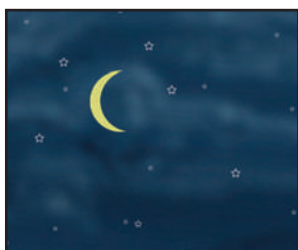
12 o' clock at night is
12 midnight.

12 o' clock in the day is
12 midday or noon.

When it is exactly 12 noon or 12 midnight it
is not mentioned with a.m. or p.m.

MATHEMATICS

Day Chart

Midnight 12 o' clock   to   Noon 12 o' clock   to   Midnight 12 o' clock
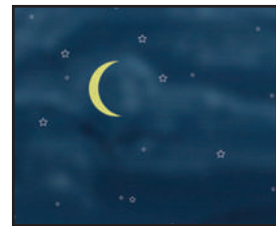
a.m   p.m

Midnight 12 o' clock to Noon 12 o' clock	Noon 12 o' clock to Midnight 12 o' clock
12 hours	12 hours

24 hours

1 day

1 day = 24 hours

Practice

Write time using a.m. or p.m.

1) 10:30 in the night is <u>10:30 p.m.</u>

2) 7:40 in the night is _____

3) 6:15 in the evening is _____

4) 3:30 in the morning is _____

5) 8:30 in the morning is _____

6) 9:00 in the morning is _____

7) 1:30 in the afternoon is _____

8) 2:45 in the afternoon is _____

MATHEMATICS

Duration of daily activities

Sundar is studying in class IV. He gets up at 6 o' clock in the morning. He goes to school at 8.30 a.m. and comes back home at 5 o' clock in the evening. He plays for some time and sits to study. He goes to bed at 9 0' clock in the night.

Can you find the duration of his daily activities?

Sundar gets up at 6 o' clock in the morning and then he goes to school at 8:30 a.m.

Duration between 6:00 a.m to 8:30 a.m is **2 hours 30 minutes.**

> Minute can be written as **min.** and
>
> hour can be written as **hr.** .

1) First period starts at 9:30 a.m, and duration of one period is an hour. The first period gets over at _____a.m.

2) Morning session gets over by 12:40 p.m.
    Duration of the morning session is _____ hr _____ min.

3) Afternoon session starts at 2:00 p.m.
    How long is the lunch break?_____ hr _____ min.

4) School gets over by 4:10 p.m.
    Duration of the afternoon session is _____ hr _____min.

5) Sundar studies from 6:30 p. m to 8:30 p.m. Duration of his study time is _____ hrs.

CALENDAR
2013

January

Su	Mo	Tu	We	Th	Fr	Sa
		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

Su	Mo	Tu	We	Th	Fr	Sa
					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

Su	Mo	Tu	We	Th	Fr	Sa
					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

Su	Mo	Tu	We	Th	Fr	Sa
	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				

MATHEMATICS

May

Su	Mo	Tu	We	Th	Fr	Sa
			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

Su	Mo	Tu	We	Th	Fr	Sa
						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

Su	Mo	Tu	We	Th	Fr	Sa
	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

Su	Mo	Tu	We	Th	Fr	Sa
				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

Su	Mo	Tu	We	Th	Fr	Sa
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

Su	Mo	Tu	We	Th	Fr	Sa
		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

Su	Mo	Tu	We	Th	Fr	Sa
					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

Su	Mo	Tu	We	Th	Fr	Sa
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				

The calendar shows days of the weeks and months of the year. We can find date of a particular day of a particular month from it.

Look at the calendar and write down the names of the months.

Months having 31 days	Months having 30 days

February month has _____ days.

Practice

Look at the month of May and answer the following questions.

May 2013						
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
			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	

1) How many Mondays are there in this month? _____

2) How many Sundays are there in this month? _____

3) Which celebration falls on 1st May? _____

4) Mention the dates that fall on Friday. _____

5) Write the first day of this month. _____

6) Name the last day of this month. _____

Months, weeks and days in the year 2013

Fill in the boxes.

Name of the month	Number of days in the month	Number of weeks and days
January	31	4 weeks 3 days
February	28	4 weeks 0 day
March	31	4 weeks 3 days
April	30	4 weeks 2 days
May	31	weeks days
June	30	weeks days
July	31	weeks days
August	31	weeks days
September	30	weeks days
October	31	weeks days
November	30	weeks days
December	31	weeks days
Total	365	48 weeks 29 days

1 Week = 7 days

48 weeks + 29 days   =   48 weeks + 28 days + 1 day

                       =   48 weeks + 4 weeks + 1 day

                       =   52 weeks and 1 day

Approximately

                1 month   =   4 weeks   1 year = 52 weeks

     An ordinary year =   365 days

      A leap year   =   366 days

     In a leap year February has 29 days.

Normally a leap year comes once in four years.

Number of days between any two given dates

How many days are there to my birthday?

Tell me your date of birth and today's date.

My date of birth is 12th August and today is 15th July.

How many days are there from 15th July to 31st July?

17 days.
(15,16,17.........31)

How many days are there from 1st August to 12th August?

12 days.

What is the total number of days.

In July 17 days and in August 12 days. So 29 days to go.

Count the number of days from 13th April to 3rd June.

April _____   18 days

May _____   31 days

June _____   +   3 days

Total   52 days

April

   30 days

 – 12 days

   18 days

Practice

Calculate the number of days between the given dates.

1)   From 4th May to 21st June.

2)   From 9th October to 11th December.

3)   From 3rd January to 15th February.

4)   From 15th August to 2nd October.

Calculate the number of holidays.

Holidays	From	To	Total days
Summer holidays			

PROJECT

Look at the current year calendar and fill up the table.

Festival	Month	Date	Day
Deepawali			
Christmas			
Miladinabi			
Children's day			
Teacher's day			

MATHEMATICS

Clock - 1 a.m.	Clock - 2 p.m.

clock - 1	8:00 a.m.
clock - 2	2:00 p.m.
Time lapse	6 hours

✦ Divide the children into three groups.

✦ First group shows the a.m. time in the clock - 1

✦ Second group shows the p.m. time in the clock - 2

✦ Third group tells the time lapse.

Fill in the blanks :

Days of an ordinary year	Months	Days of a leap year
	January	
	February	
31 days	March	
	April	30 days
	May	
	June	
	July	31 days
	August	
30 days	September	
	October	
	November	
	December	

MATHEMATICS

Answer the following questions.

1) **Write the time of the following.**

_____   _____

2) **Write time with a.m or p.m.**

i)   4 o' clock in the morning   _____

ii)   11 : 30 in the night   _____

iii)   11 : 30 before noon   _____

3) Which two successive months have 31 days?

4) Name the month which has less than 30 days.

5) How many days are there in a leap year?

6) Which is the last month of the year?

7) Calculate the number of days between Children's day and

Christmas.

MATHEMATICS

Fill in the blanks.

1) 1 hour = _____ minutes

2) _____ hours = 1 day

3) 1 year = _____ days

4) 1 year = _____ weeks

5) 12 months = _____ year

6) Quarter of an hour = _____ minutes

7) Three - quarter of an hour = _____ minutes

'I can, I did'
Student's Activity Record

Subject:

Sl. No	Date	Lesson No.	Topic of the Lesson	Activities	Remarks

MATHEMATICS