Government of Tamilnadu

## IV STANDARD

## TERM II

VOLUME 2


NOT FOR SALE

Untouchability is Inhuman and a Crime

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## Department of school Education

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# MATHEMATICS 

## IV STANDARD

## Term II



Laser typeset, Layout, Illustrations

## What these Icons stand for!



MATHEMATICS


Puzzle

Lab activity

## $\infty$

## MEASURING CAPACITY

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.


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


Reeta measured 10 times.
Geetha measured 8 times.


Measures cannot be accurate if we use non - standard measures.
So we are following the standard measures.
To measure the liquids we use millilitre and litre.

Relation between litre and millilitre


Teacher : Students, Have you seen these objects anywhere?
Sankar : I saw them in a fair price shop.
John : I have seen them in an oil shop.
Teacher : Yes, Gopu. Come here. Take 500 millilitre jar. Using it fill water in 1 litre jar then tell how many times you used the jar?
Gopu : Two times.
Teacher : From this we understood that two 500 millilitre make one litre.

500 millilitre +500 millilitre $=1$ litre

$$
1000 \text { millilitre }=1 \text { litre }
$$

we can write millilitre as ' $\mathbf{m l}$ ' and litre as 'I'

$$
\left.\frac{1}{2} I=500 \mathrm{ml}\right) \quad\left(\frac{1}{4} l=250 \mathrm{ml}\right.
$$

$\frac{3}{4} I=750 \mathrm{ml}$

To Pour the water in the following types of containers.


1. Which Container has the most capacity?
2. Which Container has the least capacity?

The bigger container holds more water than the smallest container


## Water! Water!

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


Find the capacity of water for your family to use for one day?
Name of the Student $\qquad$
Total number of persons in your family

| Drinking | $l$ |
| :--- | :--- |
| Cooking | $l$ |
| Cleaning vessels | $l$ |
| Bathing | $l$ |
| Washing clothes | $l$ |
| Other reasons | $l$ |
| Total capacity of water | $l$ |
| used for one day |  |



## Addition of litre and millilitre

© $2 I+450 \mathrm{ml}=2000 \mathrm{ml}+450 \mathrm{ml}=2450 \mathrm{ml}$
© $3 I+75 \mathrm{ml}=3000 \mathrm{ml}+75 \mathrm{ml}=3075 \mathrm{ml}$
(. $4 I+5 \mathrm{ml}=4000 \mathrm{ml}+5 \mathrm{ml}=4005 \mathrm{ml}$

## Practice

(1) Fill in the missing boxes.

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

| A | B |
| :---: | :---: |
| $1 l 250 m l$ |  |
| $1 l \quad 25 m l$ |  |
| $1 l$ | $5 m l$ |


| $B$ |
| :---: |
| 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 | $\square+\square+\square$ |
| :---: | :---: |
| 500 ml | 100 ml $+100 \mathrm{ml}+100 \mathrm{ml}+100 \mathrm{ml}+100 \mathrm{ml}$ |
| 700 ml | $\square+\square+\square+\square$ |
| 200 ml | $\square+\square+\square$ |
| 300 ml | $\square+\square+\square+\square$ |
| 200 ml | $\overline{7}_{+}$ $\square$ $+$ $\square$ $+$ $\square$ |
| 250 ml | $\square+\square$ |
| 350 ml | $\square+\square+\square$ |
| 450 ml | $\square+$ $\square$ <br> $+$ $+$ $\square$ $+$ $\square$ |
| 600 ml | $\square+$ $\square$ |
| $1 /$ | $\eta_{+}$ $\square .$ $\square$ $+$ $\square$ $+$ $\square$ |


List out the measures used in your home for the following items. Milk , Juice, Buttermilk, Ghee, Coconut oil.

Addition in capacity
Add.

## $25 l 500 m l+13 l 225 m l$

| $l$ | $m l$ |
| :---: | :---: |
| 25 | 500 |
| + | 13 | 225 | 38 | 725 |
| :---: | :---: |

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

6)

| $l$ | $m l$ |
| :---: | :---: |
| 43 | 000 |
| 14 | 500 |
| +26 | 250 |



8) | $l$ | $m l$ |
| ---: | ---: |
| 37 | 150 |
| 2 | 221 |
| +44 | 578 |
9) 

| $l$ | $m l$ |
| ---: | ---: |
| 3 | 075 |
| 19 | 529 |
| +21 | 275 |

## Life related problems

Now it is too hot. Shall we prepare cool drinks?
The ingredients are given below.


1) These are three vessels with milk.

$17 l 300 \mathrm{ml}$

$2 l 100 \mathrm{ml}$

$5 l 200 \mathrm{ml}$

* Which vessel has more milk?

औ Which has less milk?

* Find the total capacity of milk in the three vessels.

2) The milk given by a cow in three days are given below.

|  | $l$ | $m l$ |
| :---: | :---: | :---: |
| 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 had $2 l$ of buttermilk which was very sour in taste. So she added 500 ml of water. What was the capacity of buttermilk after adding water?
4) Jayanthi buys $1 l$ of idly mix. To make dosa she adds 200 ml of water. What is the capacity of dosa mix?
5) 200 ml of coconut oil, 300 ml of sesame oil and 100 ml of castor oil are mixed to light a lamp. What is the total of oil mixture?
6) What will be the total capacity of mixing 50 ml of red, 100 ml of green and 500 ml of white paint?
7) The water used to prepare food items in a function are given below.

| Food item | Quantity of water |  |
| :--- | ---: | ---: |
|  | $l$ | $m l$ |
| Rice | 25 | 200 |
| Rasam | 15 | 150 |
| Butter milk | 10 | 500 |
| Padam kheer | 5 | 50 |

* Find the total quantity of water for preparing rice and rasam.
* How much quantity of water is needed to prepare buttermilk and padam kheer?
* Find the total quantity of water required for preparing all food items.

Subtraction in capacity

## Subtract.

$15 l 350 \mathrm{ml}$ - 13 l 225 ml

| $l$ | $m l$ |
| ---: | ---: |
| 15 | 350 |
| -13 | 225 |
| 2 | 125 | | Step $1:$ Subtract 225 ml from 350 ml. |
| :---: |
| Step $2:$ Subtract $13 l$ from $15 l$. |

## Life related problem

Find the quantity of water used for soaking the clothes.


The quantity of water
Remaining water
Water used for soaking the clothes

Practice
1)


The clothes are soaked.

$=20 l$
$=-11 l$
$=9 l$
$\square$
4) Find the remaining mango juice when 200 ml is taken from $1 l 500 \mathrm{ml}$ of mango juice.

| $l$ | $m l$ |
| ---: | ---: |
| 1 | 500 |
| -0 | 200 |



Remaining mango juice
$=$ $\qquad$
5) Raja and his friends went to an oil shop. The quantity of oil bought by them are given below.

| s. <br> No | Name | Sun flower <br> oil | Groundnut <br> oil | Gingelly <br> oil | Mustard <br> oil | Coconut <br> oil |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
|  |  | 5000 | 1300 | 3000 | 0100 | 0050 |
| 2 | Elizabeth | 8100 | 0250 | 1100 | 0300 | 0100 |
| 3 | Nithish | 1200 | 0050 | 0250 | 4150 | 2000 |
| 4 | Revathi | 4150 | 3100 | 2600 | 0050 | -- |
| 5 | Rajeswari | 2250 | 4050 | 4050 | 0200 | 0400 |

$\Rightarrow \quad$ Find the total quantity of oils bought by Elizabeth.
$\Rightarrow \quad$ What is the quantity of sunflower oil bought by all?
$\Rightarrow \quad$ Who bought more mustard oil?
$\Rightarrow \quad$ Which oil was bought more?
$\Rightarrow$ 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 $m l$ | Correct value in $l$ or $m l$ |
| :---: | :---: | :---: | :---: | :---: |
| 1. |  | 20 |  |  |
| 2. | $4$ | 5 |  |  |
| 3. |  | 3 |  |  |
| 4. |  | 1 |  |  |
| 5. |  | 2 |  |  |
| 6. |  | 1 |  |  |
| 7. |  | 20 |  |  |
| 8. |  | 1 |  |  |
| 9. |  | 4 |  |  |

Fill in the blanks.

1) $7 l+500 \mathrm{ml}=$ $\qquad$ $m l$
2) $4 l+65 \mathrm{ml}=$ $\qquad$ $m l$
3) $8 l+5 m l=$ $\qquad$ $m l$
4) $4 l 890 \mathrm{ml}=$ $\qquad$ $m l$
5) $6 l 856 \mathrm{ml}=$ $\qquad$ $l+$ $\qquad$ $m l$
6) $3 l 567 \mathrm{ml}=$ $\qquad$ $l+$ $\qquad$ $m l$
7) $4 l 890 \mathrm{ml}=\ldots \quad l+\ldots \quad m l$

Do the sums.
1)

3)

| $l$ | $m l$ |
| ---: | ---: |
| 27 | 005 |
| 86 | 290 |
| +73 | 605 |

4) 


2)

5)

6)

| $r$ | $m l$ |
| ---: | ---: |
| 98 | 439 |
| -39 | 315 |

7) A drum contains 54 l 250 ml of varnish and another drum contains $75 l 650 \mathrm{ml}$. What is the total capacity?
8) A bucket contains 15 l 20 ml water and another bucket contains 12 l 300 ml . What is the total quantity?
9) A curd vendor has 89 l 500 ml of curd. If he sells 39 l 250 ml , how much is left with him?

## $c$ <br> MULTIPLICATION AND DIVISION

## MULTIPLICATION

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

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

| one ball | $=6$ | $=1 \times 6=6$ |
| ---: | :--- | :--- |
| two balls | $=6+6$ | $=2 \times 6=12$ |
| three balls | $=6+6+6$ | $=3 \times 6=18$ |
| four balls | $=6+6+6+6$ | $=4 \times 6=24$ |
| five balls | $=6+6+6+6+6$ | $=5 \times 6=30$ |
| six balls (one over) | $=6+6+6+6+6+6$ | $=6 \times 6=36$ |

## 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$$\quad$| $6 \times 6=36$ |
| ---: |
| $7 \times 6=42$ |
| $8 \times 6=48$ |
| $9 \times 6=54$ |
| $10 \times 6=60$ |

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

## Solution:

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

## Practice

1) $3 \times 6=\square$
2) $4 \times 6=\square$
3) $5 \times 6=\square$
4) If a shirt has 6 buttons, how many buttons will be in 8 shirts?
5) Number of fans in a house is 6 . Find the number of fans in 9 houses.

Complete the 7th table

| Flower has 7 petals. | $1 \times 7=7$ |
| :---: | :---: |
| bos | $2 \times 7=14$ |
| Hebs be | $3 \times 7=21$ |
| bo bo be be |  |
| best be bo th |  |
| Ho be be to be bes | $6 \times 7=42$ |
| te be be be be be be |  |
| to be do bै bै bै bै है | $8 \times 7=56$ |
| to be be be be te te be bes |  |
| tef bै bै bै bै है bै bैe bै कै | $10 \times 7=70$ |

## Practice

1) $4 \times 7=\square$
2) $7 \times 7=$
$\square$
3) $9 \times 7=\square$
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.

Complete the 8th table

| 0000000 | $1 \times 8=8$ |
| :---: | :---: |
| 00000000000000 | $2 \times 8=16$ |
| 00000000000000000000 | $3 \times 8=24$ |
| 000000000000000000000000000 |  |
|  | $5 \times 8=40$ |
| 000000000000000000000000000 00000000000000 |  |
| 0000000000000000000000000000 00000000000000000000 | $7 \times 8=56$ |
| 00000000000000000000000000000 00000000000000000000000000 |  |
| 000000000000000000000000000000 0000000000000000000000000000 |  |
| 000000000000000000000000000000 000000000000000000000000000 00000000000000 | $10 \times 8=80$ |

## Practice

1) $4 \times 8=\square$
2) $6 \times 8=$
$\square$
3) $9 \times 8=$ $\square$
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 a building has 8 pillars.

## Complete the 9th table.

| 9 | $=1 \times 9=9$ |
| :--- | :--- |
| $9+9$ | $=2 \times 9=18$ |
| $9+9+9$ | $=\overline{4}$ |
| $9+9+9+9$ | $=4 \times 9=36$ |
| $9+9+9+9+9$ | $=6 \times 9=54$ |
| $9+9+9+9+9+9$ | $=$ |
| $9+9+9+9+9+9+9$ | $=8 \times 9=72$ |
| $9+9+9+9+9+9+9+9$ | $=$ |
| $9+9+9+9+9+9+9+9+9$ | $=10 \times 9=90$ |

Practice

1) $4 \times 9=$ $\square$ 2) $7 \times 9=$ $\square$ 3) $8 \times 9=$ $\square$
2) A Kho - Kho team has 9 persons. How many persons are there in 6 teams?
3) Number of idlies prepared for one time is 9 . How many idlies will be prepared for 9 times?

## Complete the 10th table.

From the tables 1 to 9 we know the following. Complete the following.

$$
\begin{aligned}
& 10 \times 1=10 \\
& 10 \times 2=20 \\
& 10 \times 3=30 \\
& 10 \times 4=40 \\
& 10 \times 5=50 \\
& 10 \times 6=60 \\
& 10 \times 7=70 \\
& 10 \times 8=80 \\
& 10 \times 9=90
\end{aligned}
$$

| $1 \times 10=10$ <br> $2 \times 10=20$ <br> $\square$ <br> $\square$ <br> $\square$ <br> $\square$ <br> $\square$ <br> $\square$ |
| :--- |

Fill in the boxes

1) $5 \times 10=50$
2) $40 \times 100=\square$
3) $60 \times$

4) $66 \times 100=\square$
5) $705 \times$

6) $3 \times 1000=3000$
7) $500 \times$
$10=$

8) $8 \times 1000=$
9) $9 \times 1000=$

10) $7 \times 100=700$


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

$$
\begin{aligned}
5 \times 1 & =5 \\
48 \times 1 & =48 \\
760 \times 1 & =760
\end{aligned}
$$

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

Multiplication by 0

$$
\begin{array}{rll}
7 \times 0 & =0 & \text { The product of zero and any number is } \\
50 \times 0 & =0 & \text { zero. }
\end{array}
$$

## Order of multiplication

$1 \times 2=2 \times 1$ $27 \times 5=5 \times 27$
$768 \times 4=4 \times 768$
change, if we interchange the order of numbers.

## Fill in the blanks.

$$
\begin{aligned}
& 7 \times 8=56=8 \times 7 \\
& 7 \times 6=\ldots=6 \times 7 \\
& 5 \times 9=45=9 \times 5 \quad=72=8 \times 9 \\
& 10 \times 7=70=7 \times 10 \\
& 9 \times 9=81=
\end{aligned}
$$

## Multiplication - Easy methods

Multiplication by 30, $50 \ldots$ etc.

1. Multiply 36 by 50

$$
\begin{aligned}
36 \times 50 & =36 \times(5 \times 10) \\
& =(36 \times 5) \times 10 \\
& =180 \times 10 \\
& =1800
\end{aligned}
$$

2. Multiply 245 by 30

$$
\begin{aligned}
245 \times 30 & =245 \times(3 \times 10) \\
& =(245 \times 3) \times 10 \\
& =735 \times 10 \\
& =7350 \\
245 \times 30 & =7350
\end{aligned}
$$

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. $27 \times 40$
2. $34 \times 80$
3. $65 \times 90$
4. $452 \times 70$
5. $535 \times 60$
6. $791 \times 20$

Srinath arranged 20 chocolates in the following ways.


Multiplication of two digit number by one digit number
If one class has 34 students, find the number of students in 6 classes.

$$
\text { Solution: } \begin{aligned}
\text { Number of students in one section } & =34 \\
\text { Number of students in } 6 \text { sections } & =34 \times 6
\end{aligned}
$$




## Step 2:

$3 \times 6=18$ tens
Add 18 tens and (2) tens.
$18+2=20$
Write 0 in tens place and
2 in hundreds place.

Multiplication of 3 digit number 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 $=₹ 436 \times 7$

| Th H | T | O |  |
| :---: | :---: | :---: | :---: |
|  | 2 | 4 |  |
| 4 | 3 |  | 6 |
|  |  | $\times$ | 7 |
| 3 | 0 | 5 | 2 |

Steps:

* $6 \times 7=42$
write 2 in ones place and carry 4 in tens place
* $3 \times 7=21,21+4=25$
write 5 in tens place and carry 2 in hundreds place
* $4 \times 7=28,28+2=30$
write 0 in hundreds place and 3 in thousands place.

$$
\text { Cost of } 7 \text { rice bags = ₹ } 3052
$$

## Practice

1) $67 \times 6$
2) $95 \times 5$
3) $47 \times 8$
4) $87 \times 5$
5) $897 \times 6$
6) $725 \times 7$
7) $506 \times 7$
8) $923 \times 8$
9) $666 \times 8$
10) $460 \times 9$
11) $292 \times 5$
12) $788 \times 9$
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 number by two digit number A box contains 48 apples. How many apples are there in 56 boxes?
Solution: $\quad \begin{array}{ll}\text { Number of apples in a box } & =48 \\ \quad \text { Number of apples in } 56 \text { boxes } & =48 \times 56\end{array}$

$$
\text { We can write } 56=50+6
$$

| Th | H | T | O |
| :---: | :---: | :---: | :---: |
|  |  | 4 | 8 |
|  | $\times$ | 5 | 6 |
|  | 2 | 8 | 8 |
| 2 | 4 | 0 | 0 |
| 2 | 6 | 8 | 8 |


| Step 1 | Step 2 | Step 3 |
| :---: | :---: | :---: |
| 48 | 48 | 288 |
| $\times 6$ ones | $\times 50$ ones | +2400 |
| 288 ones | 2400 ones | 2688 |

## Another way



Number of apples in 56 boxes $=2688$.

## Practice

1) $59 \times 43$
2) $58 \times 56$
3) $95 \times 60$
4) $78 \times 66$
5) $38 \times 71$
6) $92 \times 76$
7) $60 \times 88$
8) $54 \times 90$
9) $70 \times 92$
10) $65 \times 98$
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?




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

Divide : $42 \div 3$
$42=30+12$





Quotient $=14$
Remainder $=0$
14 students will be in each team.

## Division of three digit number by a one digit number

## Division without remainder

Divide 875 by 7

7 \begin{tabular}{r}
125 <br>

| 875 |  |
| ---: | ---: |
| $7 \downarrow$ |  |
| 17 |  |
| 14 |  |
| 35 |  |
| 35 |  |
| 0 |  | <br>

\hline
\end{tabular}

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 $=0$

$$
875 \div 7=125
$$

Quotient $=125, \quad$ Remainder $=0$

Find the number of plates 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 $=963 \div 9$

| 107 |
| ---: |
| 963 <br> 9 <br> $9 \downarrow \downarrow$ <br> 63 <br> 63 |
| 0 |

Step 1: Take 9 hundreds.

Step 2: Take 6 tens.
6 cannot be divided by 9 .
So, put 0 tens in quotient's place.
Now take 63 ones.
$63 \div 9=7$, remainder 0 .
107 plates are distributed for each hostel

## Division with remainder

Divide 657 by 8


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 $=1$

## Practice

1) $575 \div 5$
2) $336 \div 6$
3) $456 \div 8$
4) $658 \div 7$
5) $807 \div 6$
6) $690 \div 7$
7) $981 \div 8$
8) $829 \div 9$
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 remainderDivide 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 $=0$

[^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 $=4904$
Number of children
= 8


Number of shells for each child $=4904 \div 8$

8 \begin{tabular}{r}
613 <br>
\hline 4904 <br>
$48 \downarrow$ <br>

\hline | 10 |
| ---: |
| 8 | <br>

\hline 24 <br>
24 <br>
\hline 0 <br>
\hline
\end{tabular}

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 : $\quad$ Take 24 ones. Divide 24 by 8. Quotient $=3$ and remainder $=0$.

Each child will get 613 shells.
Division with remainder


adding the remainder 2 $7002+2=7004$
Quotient $=1167$
Remainder = 2

Divide 9805 by 8


Quotient $=1225$
Remainder $=5$

Divide 5567 by 9


Quotient $=618$
Remainder $=5$

## Practice

1) $5232 \div 6$
2) $8540 \div 7$
3) $4624 \div 8$
4) $2340 \div 9$
5) $8348 \div 6$
6) $6205 \div 7$
7) $3426 \div 8$
8) $3352 \div 9$
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 in one container?

## Observe and fill in the blanks.

$$
\begin{array}{rlrl}
42 \div 6=7 & 56 \div 7 & = & 81 \div 9= \\
420 \div 6=70 & 560 \div 7 & = & 810 \div 9= \\
4200 \div 6=700 & 5600 \div 7 & = & 8100 \div 9=
\end{array}
$$

Observe the following pictures and frame problems


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

## MATHEMATICS



| Onion | 1 kg | $₹ 15$ |
| :--- | :---: | :--- |
| Potato | 1 kg | $₹ 25$ |
| Tomato | 1 kg | $₹ 12$ |
| Drumstick | 1 kg | $₹ 30$ |
| Apple | 1 kg | $₹ 80$ |
| Banana | 1 | $₹ 3$ |

## Problems

1. 
2. 
3. 
4. 



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


## Estimation in multiplication

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

| Amount per head = | Actual amount ₹ 85 | Estimated amount ₹ 90 |
| :---: | :---: | :---: |
| Amount for 27 persons = | ₹ $85 \times 27$ | ₹ $90 \times 30$ |
|  | 595 | 00 |
|  | 170 | 270 |
| Amount for 27 persons = | ₹ 2295 | ₹ 2700 |

$$
\begin{aligned}
& \text { Difference between } \\
& \begin{aligned}
\text { estimated amount and actual amount } & =₹ 2700-₹ 2295 \\
\text { Difference } & =₹ 405
\end{aligned}
\end{aligned}
$$

## 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 |
| :---: | :---: | :---: | :---: |
| $45 \times 12$ | 540 | $50 \times 10=500$ | 40 |
| $92 \times 18$ |  |  |  |
| $26 \times 22$ |  |  |  |
| $33 \times 37$ |  |  |  |

Multiply.



#### Abstract

.


| 1) | $62 \times 4$ | 2) | $35 \times 7$ | 3) | $42 \times 6$ |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 4) $89 \times 8$ | 5) | $360 \times 5$ | 6) | $402 \times 6$ |  |
| 7) $237 \times 8$ | 8) | $685 \times 9$ | 9) | $40 \times 27$ |  |
| 10) $30 \times 70$ | 11) | $81 \times 44$ | 12) | $92 \times 53$ |  |

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. $2519 \div 9$

## $\checkmark$

## CALCULATING TIME

Two friends studying in different schools are conversing each other.



## 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


Oh, sure! look here.

Quarter of an hour
Half of an hour
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 $3: 45$.

The minute hand moves from one clock number to the next number 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.


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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) My break fast time is

3) My lunch time is $\qquad$

4) My evening play time is

5) I take bath at $\qquad$

6) I go to school at $\qquad$

7) My school gets over at $\qquad$

8) My study time is
$\qquad$


## 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.

## Day Chart



Midnight 12 o' clock

to
Noon 12 o' clock

to Midnight 12 o’ clock


## 1 day = 24 hours

## Practice

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

1) $10: 30$ in the night is $10: 30$ p.m. 2) $7: 40$ in the night is $\qquad$
2) $6: 15$ in the evening is $\qquad$ 4) $3: 30$ in the morning is $\qquad$
3) $8: 30$ in the morning is $\qquad$ 6) $9: 00$ in the morning is $\qquad$
4) $1: 30$ in the afternoon is $\qquad$ 8) $2: 45$ in the afternoon is $\qquad$

## 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 for studies. He goes to bed at 90 ' 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.


1) First period starts at 9:30 a.m, and duration of one period is an hour. The first period gets over at $\qquad$ a.m.
2) Morning session gets over by 12:40 p.m. Duration of the morning session is $\qquad$ hr $\qquad$ min.
3) Afternoon session starts at 2:00 p.m. How long is the lunch break? $\qquad$ hr $\qquad$ min.
4) School gets over by $4: 10$ p.m.

Duration of the afternoon session is $\qquad$ hr $\qquad$ min.
5) Sundar studies from 6:30 p. m to 8:30 p.m. Duration of his study time is $\qquad$ hrs.

## CALENDER 2012

| 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 | 29 |  |  |  |
|  |  |  |  |  |  |  |


| 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 |  |  |  |  |  |
|  |  |  |  |  |  |  |


| 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 calender 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 $\qquad$ days.

## Practice

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

| August 2012 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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? $\qquad$
2) How many Sundays are there in this month? $\qquad$
3) Which celebration falls on $15^{\text {th }}$ August?
4) Mention the dates 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 2012
Fill in the boxes.

| Name of the month | Number of days <br> in the month | Number of weeks and <br> days |
| :---: | :---: | :--- |
| January | 31 | $\boxed{4}$ weeks $\square$ days |
| February | 29 | $\boxed{4}$ weeks $\square$ 1 day |
| March | 31 | $\boxed{4}$ weeks $\square$ 3 days |
| April | 30 | $\boxed{4}$ weeks $\square$ days |
| May | 31 | $\square$ weeks $\square$ days |
| June | 30 | $\square$ weeks $\square$ days |
| July | 31 | $\square$ weeks $\square$ days |
| August | 31 | $\square$ weeks $\square$ days |
| September | 30 | $\square$ weeks $\square$ days |
| October | 31 | $\square$ weeks $\square$ days |
| November | 30 | $\square$ weeks $\square$ days |
| December | 31 | $\square$ weeks $\square$ days |
| Total | 366 | $\boxed{\square}$ weeks $\square$ days |

## 1 Week = 7 days

$$
\begin{aligned}
48 \text { weeks }+30 \text { days } & =48 \text { weeks }+28 \text { days }+2 \text { days } \\
& =48 \text { weeks }+4 \text { weeks }+2 \text { days } \\
& =52 \text { weeks and } 2 \text { days }
\end{aligned}
$$

Approximately

$$
1 \text { month }=4 \text { weeks } 1 \text { year }=52 \text { weeks }
$$

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 the given two dates

MATHEMATICS


Count the number of days from $13^{\text {th }}$ April to $3^{\text {rd }}$ June.
$\qquad$
May $\qquad$
June $\qquad$
Total

18 days

| 31 days |
| ---: |
| $+\quad 3$ days |
| 52 days |

April
30 days
$\frac{-12 \text { days }}{18 \text { days }}$

## Practice

Calculate the number of days between given two dates.

1) From $4^{\text {th }}$ May to $21^{\text {st }}$ June.
2) From $9^{\text {th }}$ October to $11^{\text {th }}$ December.
3) From $3^{\text {rd }}$ January to $15^{\text {th }}$ February.
4) From $15^{\text {th }}$ August to $2^{\text {nd }}$ October.

Calculate the number of holidays.

| Holidays | From | To | Total days |
| :---: | :---: | :---: | :---: |
| Summer holidays |  |  |  |



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

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

## Lab activity <br> y $=$



* Divide the students 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 |  |
|  |  |  |



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
$\qquad$
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.


Fill in the blanks.

1) $\mathbf{1}$ hour $=$ $\qquad$ minutes
2) hours = 1 day
3) 1 year $=$ $\qquad$ days
4) 1 year $=$ $\qquad$ weeks
5) $\mathbf{1 2}$ months = $\qquad$ year
6) Quarter of an hour = $\qquad$ minutes
7) Three - quarter of an hour = $\qquad$ minutes

[^0]:    Quotient $=$ 1121, Remainder $=0$

