WEEK1 & 2

Topic: Whole Numbers

Subtitle: Counting, reading and writing of Whole numbers up to 999

Learning Objectives: At the end of this this lesson, pupils should be able to:

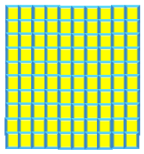
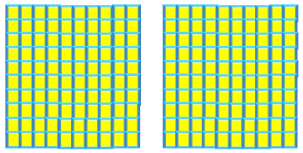
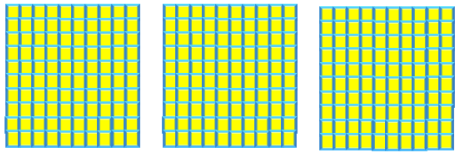
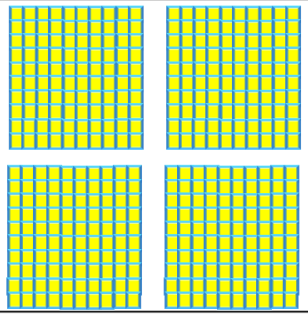
1. Count correctly numbers 1 - 999

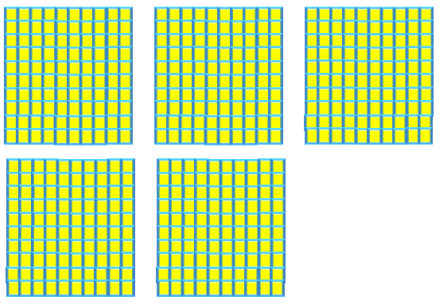
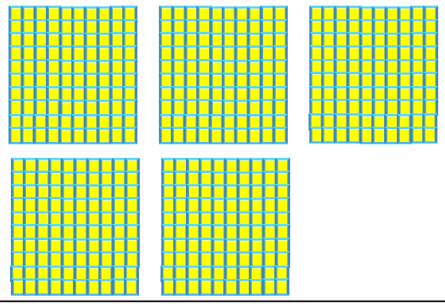
2. State the place value of a 3-digit number.

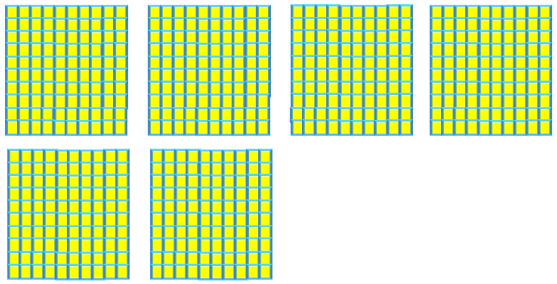
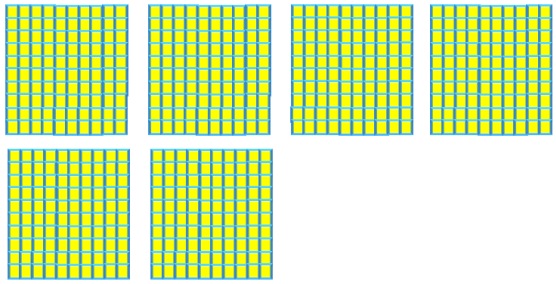
Instructional material: Number chart

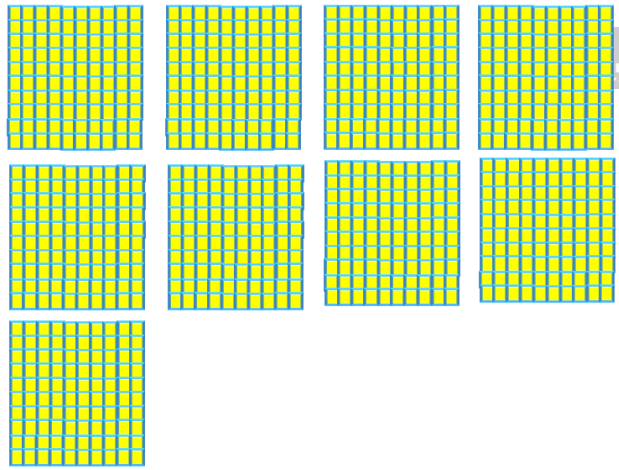
Building Background/connection to prior knowledge: pupils are familiar with numbers in hundred, tens and units from their previous classes.

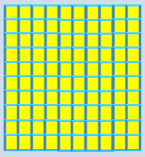
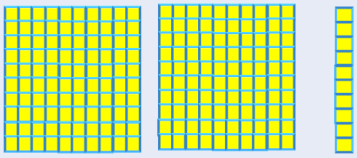
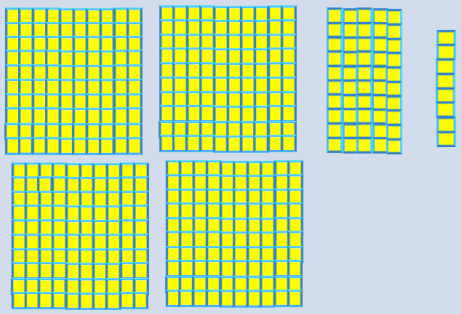
Units	Tens	Hundreds
1	10	100
2	11	101
3	12	102
4	13	103
5	14	104
6	15	105
7	16	106
8	17	107
9	18	108
	19	109
	20	110

	100	One Hundred
	2 x 100 = 200	Two Hundred
	3 x 100 = 300	Three Hundred
	4 x 100 = 400	Four Hundred

	5 x 100 = 500	Five Hundred
	6 x 100 = 600	Six Hundred

	7 x 100 = 700	Seven Hundred
	8 x 100 = 800	Eight Hundred

	9 x 100 = 900	Nine Hundred

	Values	Numerals	Words
	1 Hundred 0 Ten 0 Unit	100	One Hundred
	2 Hundreds 1 Ten 0 Unit	210	Two Hundred and Ten
	4 Hundreds 5 Tens 8 Units	458	Four Hundred and Fifty Eight

NUMERALS	HUNDREDS	TEN	UNITS
318	300	10	8

Comparing numbers Study these two numbers:

543 289

Comparing the hundreds, we see that 5 is greater than 2.

Comparing the tens, we see that 8 is greater than 4.

Comparing the units, we see that 9 is greater than 3

Examples 23 is less than 73.

Using symbols, we can write this as 23 < 73

835 is greater than 453.

Using symbols, we can write this as 835 > 453

The correct symbol has been written between the numbers

230 > 210

325 < 134

215 < 352

334 > 73

545 = 340 + 205

600 = 400 + 200

Activity: Fill in the missing number

210		230		250		270	
	300		320			350	
370		390		410			440
	460		480		500		
530		550				590	

Activity: Fill in the missing number

100		200		300	
	450		550		650
700		800		900	

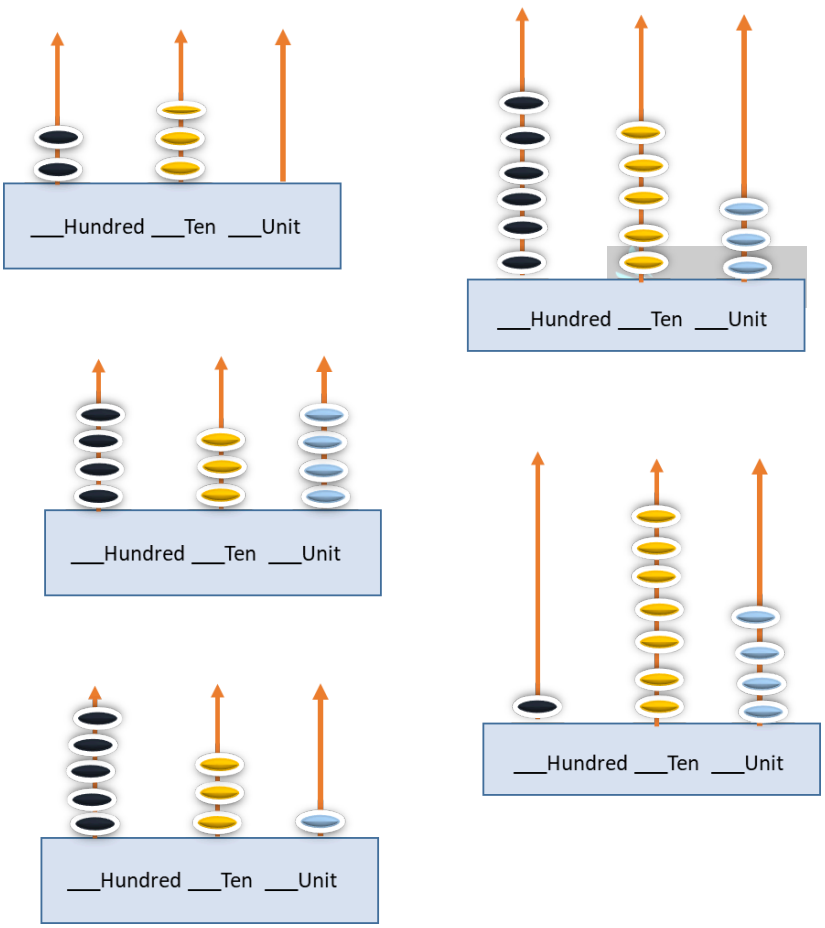
Activity: Write out their numbers

1 Hundred	3Tens	0Unit	=
4 Hundreds	6Tens	3Units	=
7 Hundreds	5Tens	8Units	=
8 Hundreds	0Ten	6Units	=
2 Hundreds	4Tens	0Unit	=

Activity: Write out their numbers in the place value

Numerals	Hundreds	Tens	Units
6			
59			
760			
679			

Activity: Write out their numbers in the place value



Activity: Complete the mathematical sentences. Using 'greater than' or 'less than.'

430 is greater than 405 $430 > 405$

625 is greater than 330 $625 > 330$

Activity: Copy and complete the mathematical sentences below. Use 'greater than' or 'less than.'

1. 4671 is _____ 311
2. 234 is _____ 146
3. 299 is _____ 482
4. 123 is _____ 163
5. 456 is _____ 565
6. 401 is _____ 699

Activity: Arrange the following numbers in order from smallest to largest

a) 600, 200, 400, 300
b) 227, 285, 257, 239
c) 175, 65, 543, 100

Week: 3 & 4

Topic: Fractions

Fractions

Subtitle: Division of whole shapes and objects into parts

Learning Objectives: At the end of this this lesson, pupils should be able to:

1. state fraction of a group of concrete objects.

2. divide shapes into ½, 1/3, ¼ etc.

Resources and materials:

Scheme of work

Online information

Instructional material: charts

Building Background/connection to prior knowledge: pupils are familiar with the topic in their previous classes.

CONTENT

Meaning of fractions

A fraction is one or more parts of a whole, which is divided into a number of equal parts.

½ means 1 part out of a whole, which is divided into 2 equal parts.

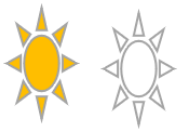
¼ means 1 part out of a whole, which is divided into 4 equal parts.

3/4 means 3 parts out of a whole, which is divided into 4 equal parts.

$$\frac{1}{2}$$ ← Numerator; ← Denominator

The fraction of the uncoloured object

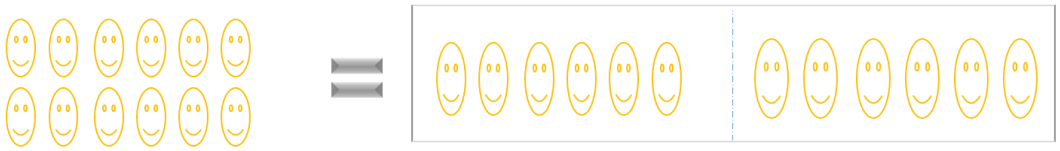
$^{2}/_{8}$



½

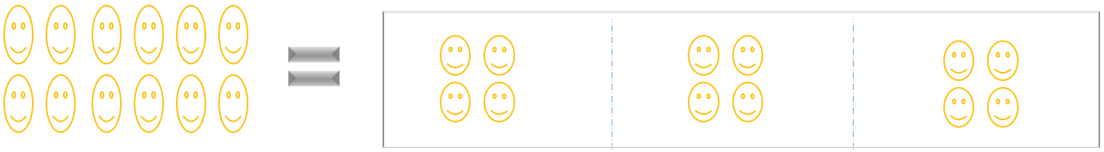
$^{3}/_{12}$

1 group of 12 faces has been divided into 2 equal groups.



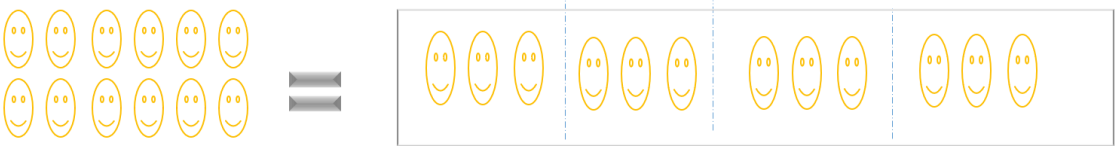
1 group of 12 ½ of 12 = 6 ½ of 12 = 6

1 group of 12 faces has been divided into 3 equal groups.



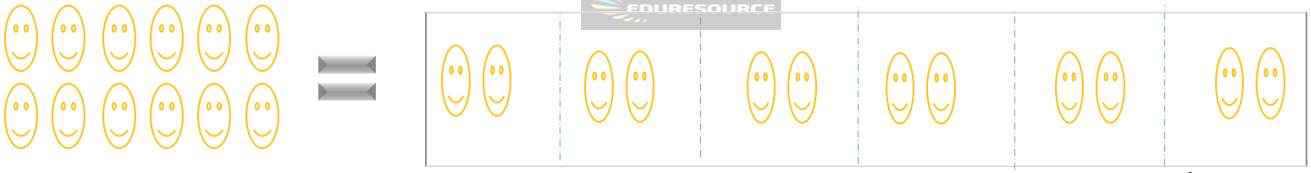
1 group of 12 $^1/_3$ of 12 = 4 $^1/_3$ of 12 = 4 $^1/_3$ of 12 = 4

1 group of 12 faces has been divided into 4 equal groups.



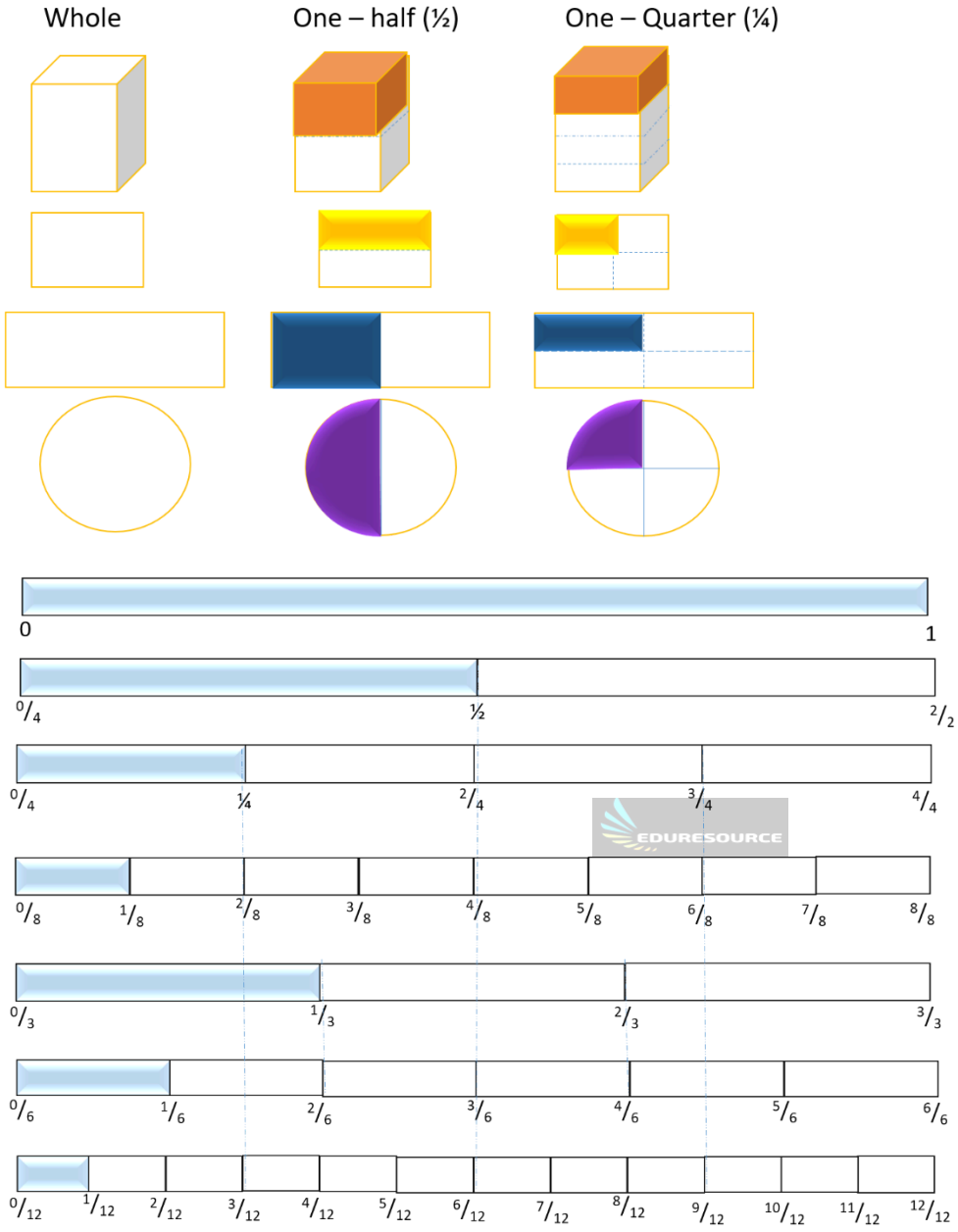
1 group of 12 ¼ of 12 = 3 ¼ of 12 = 3 ¼ of 12 = 3

1 group of 12 faces has been divided into 6 equal groups.



1 group of 12 $^1/_6$ of 12 = 2 $^1/_6$ of 12 = 2 $^1/_6$ of 12 = 2 $^1/_6$ of 12 = 2 $^1/_6$ of 12 = 2 $^1/_6$ of 12 = 2

One- half (½) and one quarter (¼) of a whole



From the chart above:

$\frac{1}{2} = \frac{2}{4} = \frac{4}{8} = \frac{6}{12}$

Fractions like this $\frac{1}{2}, \frac{2}{4}, \frac{4}{8}, \frac{6}{12}$ are called equivalent fractions.

a) Multiply the numerator by 2. $1 \times 2 = 2$
Multiply the denominator by 2. $2 \times 2 = 4$
Therefore, $\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$

$\frac{1}{2} = \frac{2}{4}$

b) Multiply the numerator by 3. $1 \times 3 = 3$
Multiply the denominator by 3. $2 \times 3 = 6$
Therefore, $\frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6}$

$\frac{1}{2} = \frac{3}{6}$

c) Multiply the numerator by 4. $1 \times 4 = 4$
Multiply the denominator by 4. $2 \times 4 = 8$
Therefore, $\frac{1}{2} = \frac{1 \times 4}{2 \times 4} = \frac{3}{6}$

$\frac{1}{2} = \frac{4}{8}$

Therefore $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$

From the number line, we can see: $\frac{1}{6}$ is to the left of $\frac{1}{4}$,

Therefore, $\frac{1}{6}$ is less than $\frac{1}{4}$ $\frac{1}{6} < \frac{1}{4}$

From the number line, we can see: $\frac{1}{4}$ is to the left of $\frac{1}{3}$

Therefore, $\frac{1}{4}$ is less than $\frac{1}{3}$ $\frac{1}{4} < \frac{1}{3}$

From the number line, we can see: $\frac{2}{3}$ is greater than $\frac{1}{2}$ $\left(\frac{2}{3} > \frac{1}{2}\right)$

$\frac{1}{2}$ is less than $\frac{2}{3}$ $\left(\frac{1}{2} < \frac{2}{3}\right)$

Activity: Write the denominator of the fraction.

$\frac{3}{5}$ ☐

$\frac{6}{8}$ ☐

$\frac{2}{4}$ ☐

$\frac{2}{3}$ ☐

Activity : Write the fraction of the coloured object

Activity: Answer the following questions

Which is smaller ¼ or ½

Which is greater ⅔ or ½

Which is greater ⅙ or ⅓

Which is smaller ⅙ or ⅛

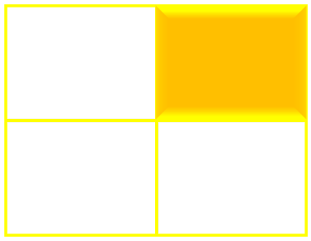
Activity: Copy and complete. Write the correct sign of >, < or =.

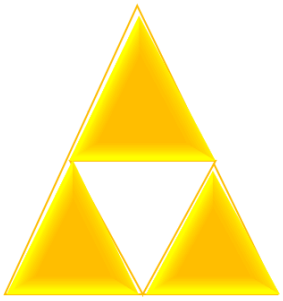
$\frac{2}{5}$	$\frac{1}{5}$
$\frac{2}{3}$	$\frac{1}{3}$
$\frac{5}{8}$	$\frac{3}{8}$
$\frac{1}{8}$	$\frac{5}{6}$
$\frac{1}{6}$	$\frac{1}{12}$

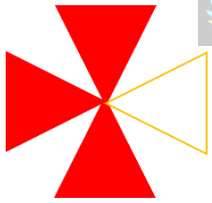
Number	Half
6	3
8	4
10	5
12	6
16	8
18	9
20	10
22	11
24	12

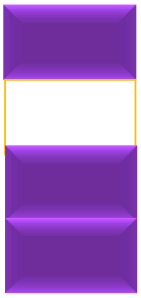
Number	Quarter
4	1
16	4
20	5
24	6
28	7
32	8
36	9
40	10

Divide a piece of square paper into four equal parts. Shade or colour one part. The three parts which are not coloured are three out of four. This is called three quarters and is written as $^{3}/_{4} = {}^{1}/_{4} + {}^{1}/_{4} + {}^{1}/_{4} = {}^{3}/_{4}$









Activity: Answer the Questions Correctly

Number	Half
6	3
	4
10	
	6
16	8
18	
	10

Number	Quarter
4	1
16	
	5
24	
	7
32	

Activity: Match the equivalent of each of the fraction

$\frac{1}{2}$	$\frac{10}{12}$
$\frac{2}{6}$	$\frac{9}{12}$
$\frac{3}{4}$	$\frac{4}{12}$
$\frac{5}{6}$	$\frac{2}{4}$

Week 5&6

Topic: Addition

1. add 2digit numbers

2. add 3 numbers taking two at a time

3. Add fraction with the same denominator

Resources and materials:

Scheme of work

Online information

Instructional material: number charts

Building Background/connection to prior knowledge: pupils are familiar with the topic in their previous classes.

CONTENT

Addition of 2-digit numbers with renaming

Addition of 2-digit numbers with renaming is solved by using:

- the expanded method and,
- the direct or short method.

Examples

T	U
2	5
+1	0

=

T	U	
20	+ 5	→
+10	+ 0	→
30	+ 5 = 35	

T	U
2	5
+1	0
3	5

The unit (u), 5 + 0 = 5 units = 5. Write 5 units under the units column. In the tens column, 2 + 1 = 3 tens = 30 tens.

T	U
6	9
+4	2

=

T	U	
60	+ 9	→
+40	+ 2	→
100 + 11 = 100 + 10 + 1		

T	U
6	7
+4	2
1	1 1

The unit(u), 9 + 2 = 11 units = 9 + 2, which is 1 ten and 1 unit. Write 1 unit under the units column and carry 1 ten to the tens column. In the tens column, 1 + 6 + 4 = 11 tens = 10 tens + 1 ten, which is 1 hundred and 1 ten. Write 1 ten under the tens column and carry 1 hundred to the hundreds column

H	T	U	
6	2	0	→
+2	3	2	→
8	5	2	→

H	T	U
8	5	2

H	T	U
6	2	0
+2	3	2

=

600	+ 20	+ 0
200	+ 30	+ 2
800	+ 50	+ 2

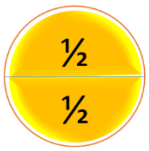
→

H	T	U
6	2	0
+2	3	2
8	5	2

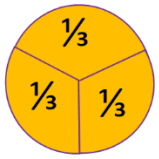
H	T	U
4	$^{1}5$	8
+1	2	4
5	8	2

H	T	U
$^{1}6$	$^{1}7$	8
+4	4	2
11	2	0

First Term Mathematics E-lesson Note

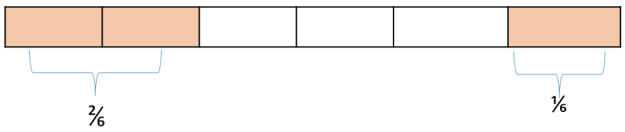


$= \frac{1}{2} + \frac{1}{2} = \frac{2}{2} = 1$ whole

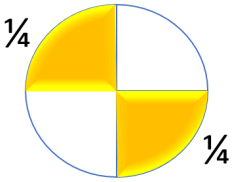


$= \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{3}{3} = 1$ whole

$= \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{4}{4} = 1$ whole



$\frac{2}{6} + \frac{1}{6} = \frac{2+1}{6} = \frac{3}{6}$



$\frac{1}{4} + \frac{1}{4} = \frac{1+1}{4} = \frac{2}{4} = \frac{1}{2}$

Activity: Solve the following Questions

H	T	U
4	5	3
+1	2	4

H	T	U
4	5	3
+4	4	2

H	T	U
6	2	5
+2	2	4

H	T	U
6	5	5
+2	3	2

Activity: Solve the following questions

H	T	U
8	2	5
+2	2	4

H	T	U
6	8	9
+2	3	2

H	T	U
9	6	9
+4	4	2

H	T	U
7	6	6
+4	4	2

Activity: Answer the Questions Correctly

$\frac{2}{6} + \frac{1}{4} =$

$\frac{1}{2} + \frac{1}{4} =$

$\frac{1}{6} + \frac{1}{4} =$

$\frac{2}{4} + \frac{1}{2} =$

$\frac{3}{6} + \frac{1}{2} =$

I was on 2, jumped on 6, I landed on 8.

2 + 6 = 8

I was on 3, jumped on ___ , I landed on 5 .

3 + ☐ = 5

I was on ____, jumped on 2, I landed on 7 .

☐ + 2 = 7

I was on 14, jumped on ___ , I landed on 20 .

14 + ☐ = 20

I was on ____, jumped on 10 , I landed on 20 .

☐ + 10 = 20

Week 7&8

Topic: Subtraction

Learning Objectives: At the end of this this lesson, pupils should be able to:

1. Subtract 2digit numbers
2. Subtract 3digit numbers
3. Subtract 3 numbers taking two at a time
4. Subtract fraction with the same denominator

Instructional material: number charts

Building Background/connection to prior knowledge: pupils are familiar with the topic in their previous classes.

CONTENT

Subtraction of 2digit numbers

T	U	
2	9	= (20 + 9)
-1	7	= - (10 + 7)
		10 + 2
1	2	12

T	U	
2	9	Units column 9 – 7 = 2
-1	7	Tens column 2 – 1 = 1
1	2	Answer = 12

Subtraction of 3digit numbers

H	T	U		
6	5	4	=	(600 + 50 + 4)
-2	2	2	= -	(200 + 20 + 2)
4	3	2		400 + 30 + 2
				432

H	T	U
6	5	4
-2	2	2
4	3	2

Units column 4 – 2 = 2
Tens column 5 – 2 = 3
Hundreds column 6 – 2 = 4
Answer = 432

T	U
2	5
-1	0
1	5

T	U
1	4
-1	2
	2

T	U
3	2
-1	0
2	2

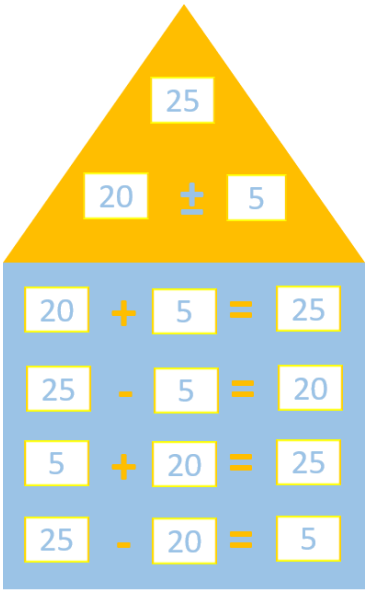
T	U
2	4
-1	4
1	0

T	U
~~2~~3	14
-2	7
0	7

T	U
~~2~~3	10
-1	5
1	5

T	U
~~8~~9	12
-5	4
3	8

T	U
~~7~~8	5
- 2	7
5	8



$\frac{2}{6} - \frac{1}{6} = \frac{2-1}{6} = \frac{1}{6}$

$\frac{2}{4} - \frac{1}{4} = \frac{2-1}{4} = \frac{1}{4}$

Activity: Solve the following questions

T	U
6	4
-2	7

T	U
8	6
-1	7

T	U
9	0
-3	8

T	U
2	5
-1	9

Activity: Solve the following questions

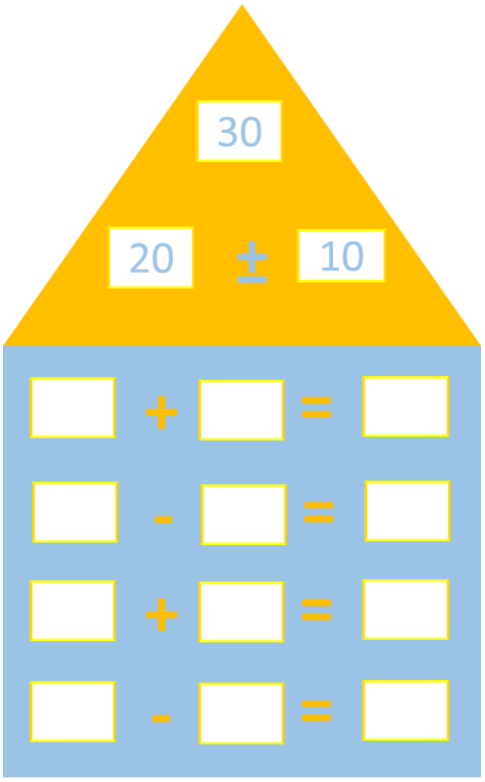
T	U
6	4
-2	7

T	U
8	6
-1	7

T	U
9	0
-3	8

T	U
2	5
-1	9

Activity: Solve the following questions



Activity: Solve the following questions

$\frac{2}{6} - \frac{1}{4} =$

$\frac{1}{4} - \frac{1}{2} =$

$\frac{1}{6} - \frac{1}{4} =$

$\frac{2}{4} - \frac{1}{2} =$

$\frac{3}{6} - \frac{1}{2} =$

Activity: Solve the following questions

How many do I need to take away to get from 34 to 25

$34 - 25 = 9$

How many do I need to take away to get from 40 to 22 = ☐

How many do I need to take away to get from 32 to 26 = ☐

How many do I need to take away to get from 50 to 15 = ☐

First Term Mathematics E-lesson Note

Week 9 & 10

Topic: Multiplication I

1. Multiply from 1×1 to 9×9
2. Multiply 2digit number by 1digit number

Resources and materials:

Scheme of work

Online information

Instructional material: multiplication table chart

Building Background/connection to prior knowledge: pupils are familiar with the topic in their previous classes.

CONTENT

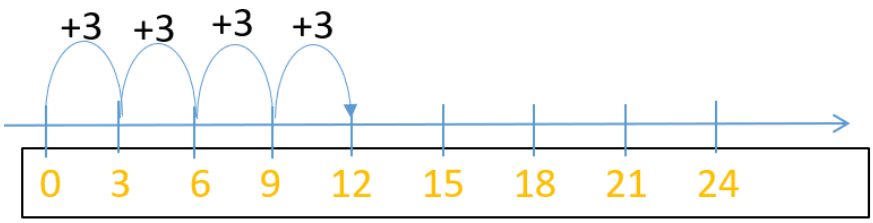
Multiplication is the process of combing the sum of a number with itself a specified number of times. Multiplication of any number by 1 gives you that same number, example: 1×6=6 and 9×1=9.

Multiplication Chart

Numbers	Repeated Addition	Multiplication
2	2	2 x 1
4	2 + 2	2 x 2
6	2 + 2 + 2	2 x 3
8	2 + 2 + 2 + 2	2 x 4
10	2 + 2 + 2 + 2 + 2	2 x 5
12	2 + 2 + 2 + 2 + 2 + 2	2 x 6
14	2 + 2 + 2 + 2 + 2 + 2 + 2	2 x 7
16	2 + 2 + 2 + 2 + 2 + 2 + 2 + 2	2 x 8
18	2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2	2 x 9
20	2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2	2 x 10
22	2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2	2 x 11
24	2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2	2 x 12

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	20	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100
11	11	22	33	44	55	66	77	88	99	110
12	12	24	36	48	60	72	84	96	108	120

Multiplication Example:



3 + 3 + 3 + 3 = 12

3 x 4 = 12

Expanded method		Short method	Steps
1 3	= 10 + 3	$^{2}1$ 3	Multiply the unit
× 8	× 8	× 8	column: 8 × 3 = 24 =
	80 + 24	10 4	2 tens and 4 units.
	= 80 + 20 + 4		Write 4 units in
	= 100 + 4		the units column and
	= 104		carry 2 tens to the tens column.
			Multiply the tens column and add the 2 tens
			1 × 8 + 2 = 8 + 2 = 10 tens =
			1 hundred
			Product = 104

Multiplication of numbers 1 to 10

Examples

1. 0 × 6 = 6 i.e 0 into 6places – 0+0+0+0+0+0= 0
2. 7 × 6=42- 7+7+7+7+7+7=42
3. 6 × 4=24- 6+6+6+6=24
4. 10 × 6=60-10+10+10+10+10+10=60
5. 6 × 8=48- 6+6+6+6+6+6+6+6=48
6. 5 × 2=10- 5+5=10

Multiplication of 2-digit numbers by 1-digit numbers

1. 23×2=46; 2 goes into 3 gives 6 and into 20 gives 40
2. 20×4=80
3. 43×4=172
4. 11×8=88
5. 14×9= 126

Multiplication word problems

1. In a box of juice there are 12 packets. How many packets are there in

10 boxes of juice?

Solution; 1 box of juice = 12packets

Therefore, 10 boxes with contain = 10×12=120packets

2. A pentagon has 5 sides. How many sides do 12 pentagons have?

Solution; 1pentagon =5sides

Therefore 12 pentagones will have= 12×5= 60sides

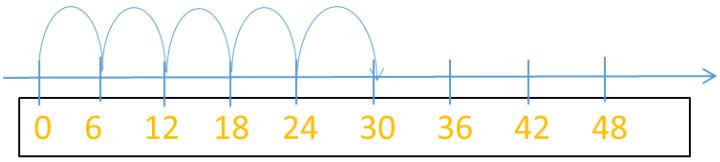
3. A bicycle has 2 wheels. How many wheels do 55 bicycles have?

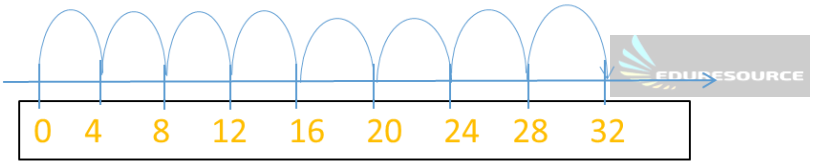
55×2= 110

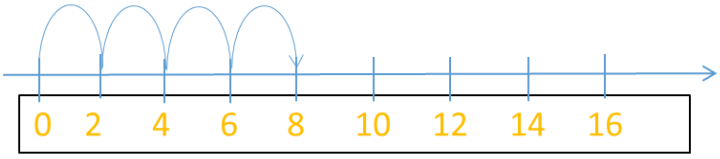
4. A box of fruit drinks contain 48 cans. How many cans are there in 7 boxes?

Solution; 48×7= 336

Activity: Copy and multiply on the number line







Activity: Fill in the chart

x	1	2	3	4	5	6	7	8	9	10
1	1	2		4		6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12		18	21	24		
4	4	8		16	20	20		32	36	40
5	5		15	20		30	35		45	50
6	6	12	18		30			48		60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24		40		56	64	72	80
9	9	18		36	45	54	63		81	90
10	10	20	30	40	50		70	80		
11	11	22	33	44	55	66		88	99	110
12	12	24	36		60	72	84			120

Activity: Complete the multiplication table by counting the objects. Record your answers.

	**3 x 1**	**3**
	4 x 3	12
		
		
		
		

Activity: Answer the following questions

1. $22 \times 4 =$

2. $43 \times 4 =$
3. $13 \times 8 =$
4. $17 \times 9 =$
5. $19 \times 7 =$

Activity: Answer the following questions

1 sweet cost ₦10
5 sweets will cost =

A girl has two pencils
6 girls will have _____ pencils

A cow has 4 legs
6 goats will have _____ legs