NUMBERS

72V8RC

Travel Through

1. Look at the above picture and answer the following.

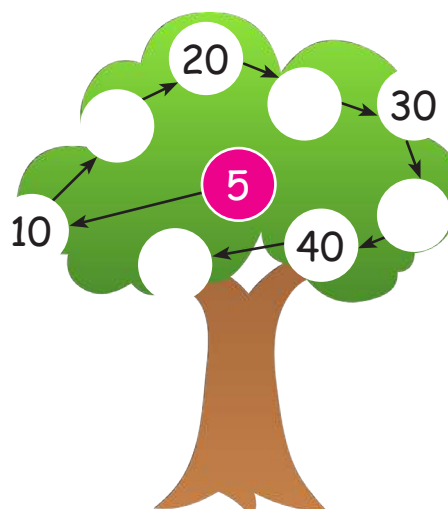| Flowers	Number and Number name of flowers
🌹	_____
🌼	_____
🌸	_____

2. Fill in the blanks in each of the figures with missing numbers.

a. 51 ⬡ ⬡ ⬡ 55 ⬡ ⬡ ⬡ 60

b. ✦ 75 ✦ 77 ✦ 79

c.

3. Complete the given facts by placing '**+**' for addition and '**−**' for subtraction.

$$9 \underline{} 3 = 12$$

$$80 \underline{} 11 = 91$$

$$56 \underline{} 21 = 35$$

$$92 \underline{} 20 = 72$$

$$12 \underline{} 3 = 9$$

$$75 \underline{} 17 = 92$$

2.1 Numbers sequence upto 1000.

❑ Numbers 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 are one digit numbers.

❑ Numbers from 10 to 99 are two-digit numbers.
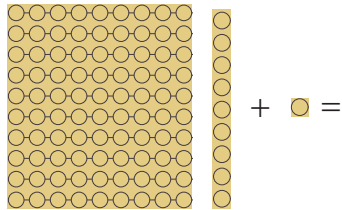
> 99 is the biggest two-digit number.
> 10 is the smallest two-digit number.

Formation of the numbers such as 10,100 and 1000.

when 1 is added with 9 ,we get 10.

Tens	Ones
	9
	1
1	0

+ ⚬ =

	Hundred	Tens	Ones
		9	9
+			1
	1	0	0

When we add 1 with 99 we get 100. The numeral 100 represents the number "HUNDRED", the smallest three digit number. One hundred has 10 tens.One hundred has 100 ones.
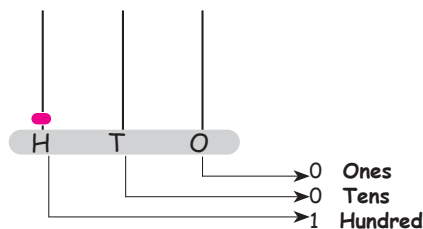
	Th	H	T	Ones
		9	9	9
+				1

	Th	H	T	Ones
		9	9	9
+				1
	1	0	0	0

When we add 1 with 999 we get 1000. The numeral 1000 represents the number "Thousand", the smallest four digit number. One thousand has 10 hundreds.one thousand has 100 tens.

Read and write all three digit numbers and number names.

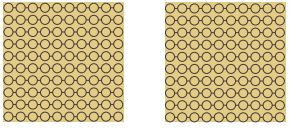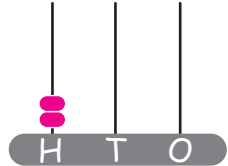We shall represent 100 in an abacus as shown below.

0 Ones
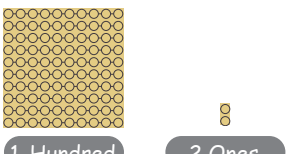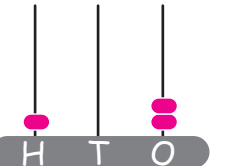0 Tens
1 Hundred

	H	T	O
	1	0	0

No beads in the ones place shows 0 ones.

No beads in the tens place shows 0 Tens.

1 bead in the hundreds place shows 1 hundred.

The place value higher than tens place is hundreds place.
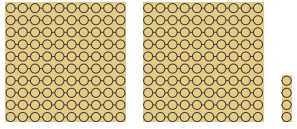Hundred (or) 100 is the smallest three digit number.
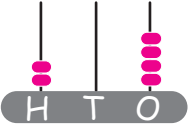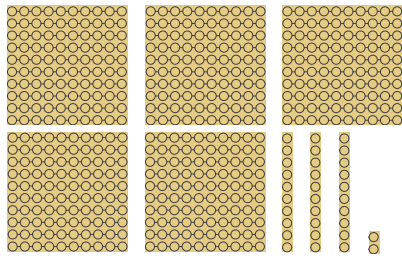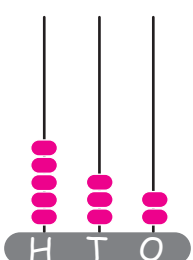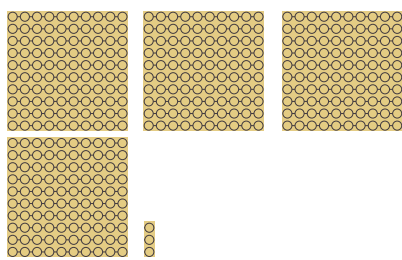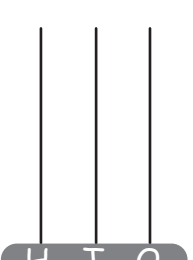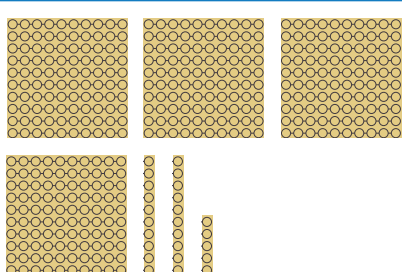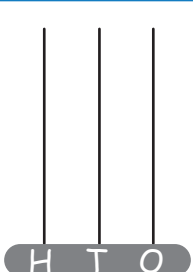
Examples:

Number Blocks	Abacus	Numeral form	Number name
1 Hundred 1 Hundred	H T O	H: 2 T: 0 O: 0	Two hundred
1 Hundred 2 Ones	H T O	H: 1 T: 0 O: 2	One hundred two

Activity 1

10 Ones	=	1 Ten
10 Tens	=	1 Hundred
10 Hundreds	=	1 Thousand.

Number Blocks	Abacus	Numeral form	Number name
	H T O	H T O	Two hundred four
	H T O	H T O	_____ _____
	H T O	H T O	_____ _____
	H T O	H T O	_____ _____

Teacher's note: Let the children explore to represent many 3 digit numbers by using math kit.

Read and write the numbers from 101 to 200.

101	111	121	131	141	151	161	171	181	191
102						162		182	
		123							193
104							174		
	115			145					
106								186	
			137			167			197
108							178		
110	120	130	140	150	160	170	180	190	200

The number name of the numeral 101 is written by adding one hundred with one as one hundred one. The numeral 199 is written as one hundred ninety nine.

Teacher's note: Teacher can give practice to children to write the numbers upto 1000.

Activity 2

Write the numerals for the given number names.

Number names	Numerals
Five hundred thirty five	535
One hundred seven	107
One hundred twenty eight	
Six hundred	
Nine hundred five	

Activity 3

Write the number names for the following Numerals.

Numerals	Number name
150	One hundred fifty
225	
306	
535	
907	Nine hundred seven
992	

Activity 4

Form three digit numbers using each of the given numbers only once.
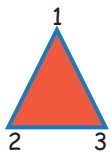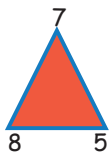
Place value of a numeral in the given number.

Write the place value of the underlined digit in the given numbers.

Numeral	Place value	Number name of the underlined digit
2 9 6	Tens	Ninety
29 6	Ones	Six
2 96	Hundreds	Two hundred
1 9 6	Tens	Ninety
4 1 7		
6 3 8		
9 4 5		

Find the numbers represented in the abacus by writing their place value.
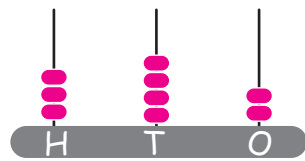
3 – Hundreds

4 – Tens

2 – Ones

$300 + 40 + 2$

342
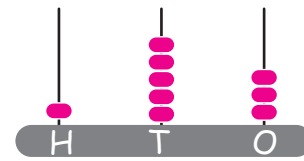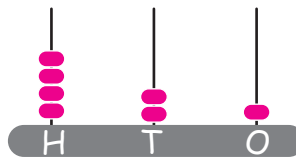
Expand the given numbers into ones tens and hundreds

Number	Expanded Form
246	$200 + 40 + 6$
570	$500 + 70 + 0$
637	
603	
989	

Write the simplified form of the number of the given expansions.
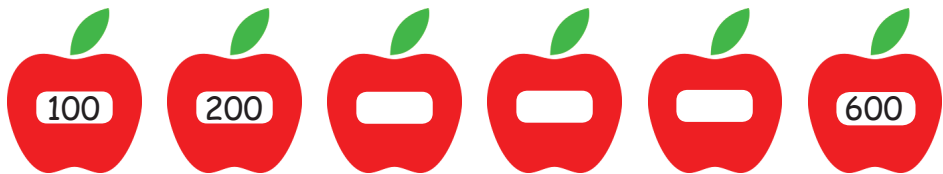
Expanded form	Simplified form
$300 + 90 + 8$	398
$200 + 50 + 6$	
$900 + 80 + 5$	
$500 + 50 + 7$	

Skip counting starting from any given number.

Example:

1.   → Skip counted in ones

2.   → Skip counted in twos
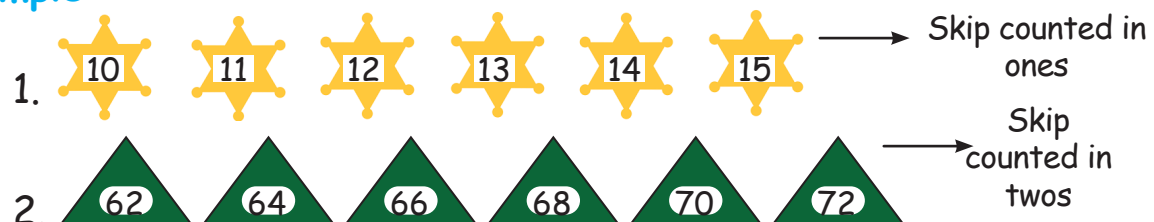
Complete the following by skip counting in 5s, 10s and 100s.

1. 250 | 255 | | | 270 |

2. | 500 | 510 | | 540 | | |

3. 100 | 200 | | | | 600

Odd numbers and even numbers

Even numbers 0   2   4   6   8   10   12

Odd numbers   1   3   5   7   9   11   13

" Numbers ending with 1, 3, 5, 7 and 9 are called ODD numbers.
Numbers ending with 0, 2, 4, 6 and 8 are called EVEN numbers. "

Activity 5

Circle the even numbers	Circle the odd numbers
8, 69, 70, 84, 99	7, 26, 33, 61, 84
112, 131, 156, 170, 186	105, 116, 125, 142, 151
226, 300, 303, 440, 478	219, 232, 245, 357, 390
542, 570, 575, 600, 610	540, 555, 557, 603, 609
931, 948, 952, 982, 999	918, 919, 935, 953, 998

15

Colour the balloons with odd number by yellow and even number by red.

964

256 489 633 787

125

842 575 747 546

783 288 649

450
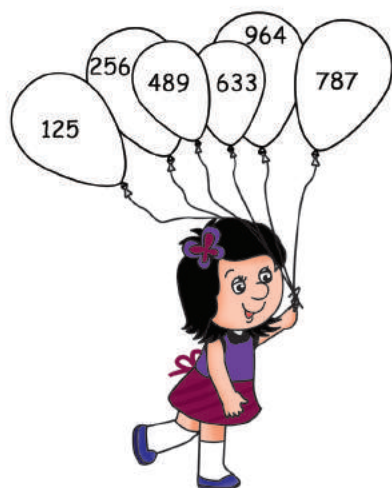
In number sequence, after every odd number there is an even number. Similarly after every even number there is an odd number.

2.2 Comparison of numbers

Ramu has 125 groundnut chocolates and Geetha has 200 groundnut chocolates. Who has more?

Ramu

Geetha

100   125   150   175   200   225   250   275
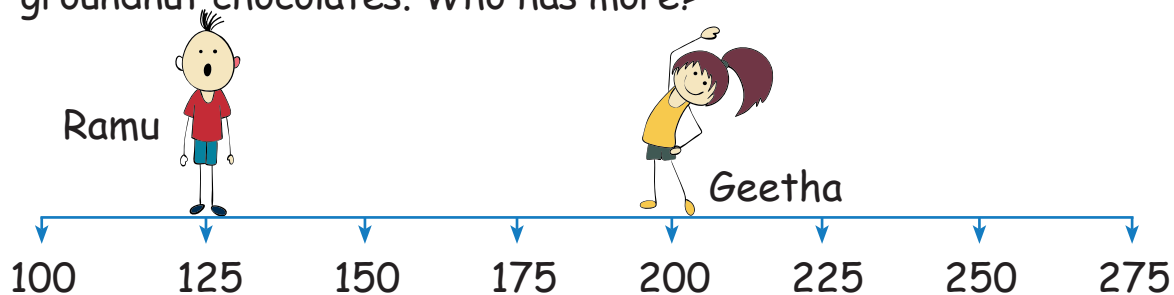
Greater and smaller numbers

Amuthan has 3 chocolates and his sister Meenakshi has 8 chocolates. Who has more chocolates?
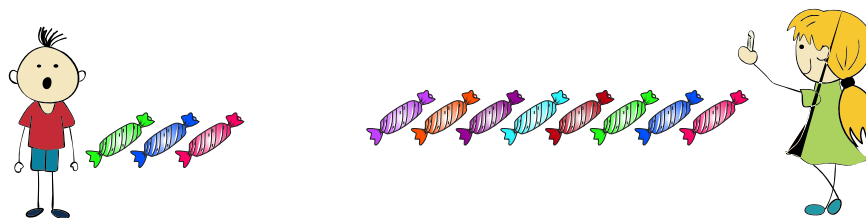
Any number which comes before a number is smaller number.
Any number which comes afer a number is greater number.

In a number line 3 comes before 8 or 8 comes after 3.

$$\longleftarrow \; 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11 \quad 12 \; \longrightarrow$$

3 is smaller than 8.
8 is greater than 3.
Meenakshi has more chocolates.

Know more
'0' does not have any value at the beginning of a number.

Using symbols
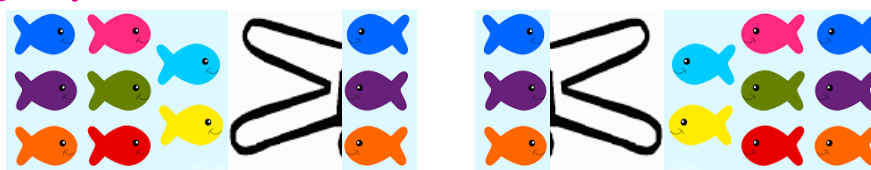
3 is smaller than 8
we write $3 < 8$

27 is smaller than 40
we write $27 < 40$

8 is greater than 3
we write $8 > 3$

91 is greater than 49
we write $91 > 49$

27 40   91 49

17
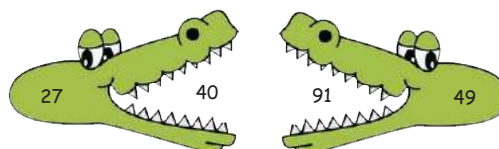
1. Comparison of numbers with different digits.

The number which has more digits is the greater number.
The number 115 has 3 digits and 89 has only 2 digits.
So 115 is **greater than** 89. We write 115 > 89.

Compare 115 and 89

H	T	O
1	1	5

H	T	O
	8	9

2. Comparison of numbers with equal digits.

Step 1: If the number of digits are equal, compare the digit in the hundreds place. The number which has a greater value in the hundreds place is greater. 2 is greater than 1. So, 250 is greater than 160. We write 250 > 160. We can also say 160 < 250.

Compare 160 and 250

H	T	O
1	6	0

H	T	O
2	5	0

Look at the hundreds place

Step 2: If the digits in the hundreds place are same, compare the digits in the tens place. The number which has the greater digit in the tens place is the greater number.
The digit in the hundred place are the same. Compare the digits in the tens place. 5 is greater than 4. so, 151 is greater than 143. We write 151 > 143. We can also say 143 < 151.

H	T	O
1	4	3

H	T	O
1	5	1

Step 3: If the digits in the hundred and the tens place are same, compare the digits in the ones place. The number which has the greater digit in the ones place is the greater number. The digits in the hundreds place and tens place are the same. Comparing the digits in the ones place.

Compare 141 and 148

H	T	O
1	4	1

H	T	O
1	4	8

8 is greater than 1

So the number 148 is greater than 141.

We write 148 > 141

We can also say 141 < 148.

3.   **Comparing numbers with same value in all the digits**

The digits in the hundreds place, tens place and ones place are same.

So,   536 = 536

H	T	O
5	3	6

H	T	O
5	3	6

> The greatest three digit number is 999.
> The smallest three digit number is 100.

Try this

Put <, >, and = in the boxes provided.

103 ☐ 438   710 ☐ 710

250 ☐ 069   614 ☐ 618

408 ☐ 308   719 ☐ 917

2.3   Ordering

Ascending and Descending order.

111, 112, 113, 114, 115

When we write the numbers from smaller to greater, we call it **"Ascending order"**.

When we write numbers from greater to smaller, we call it **"Descending order"**.

Example:

Let us arrange the numbers 235, 230, 238 in ascending order and in descending order.

Ascending order	Descending order
$230 < 235 < 238$ 230, 235, 238	$238 > 235 > 230$ 238, 235, 230
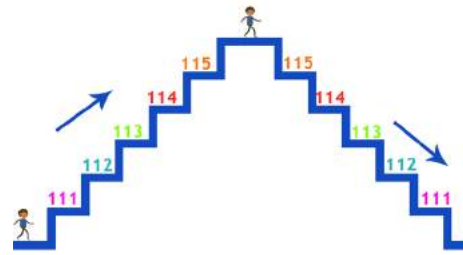
Try this

1. Arrange the following numbers in ascending order.

a. 55, 63, 40, 8

c. 50, 405, 109, 600

b. 217, 201, 215, 219

d. 785, 757, 718, 781

2. Arrange the following numbers in descending order.

a. 212, 503, 369, 60

c. 323, 303, 332, 33

b. 051, 100, 810, 167

d. 205, 210, 290, 300

20

Forming 3 digit numbers using given digits

Consider the numbers 2 and 7.

We shall form the greatest and smallest two digit numbers using these numbers.

The two-digit numbers formed using 2 and 7 are 27,72,22,77. (77 is the greatest and 22 is the smallest 2 digit numbers)

Similarly, 7, 4 and 8 are given numbers.

We shall form the greatest and smallest three digit number using these numbers (without repetition).

478, 487, 748, 784, 847, 874

Arrange the given digits from the smallest number to greatest number, we get **ascending order**.

478, 487, 748, 784, 847, 874

Arrange the above from the greatest number to smallest number, we get **descending order**.

874, 847, 784, 748, 487,478

874 is the greatest number and 478 is the smallest number.

Practice

1. Form greatest and smallest numbers using the given digits (without repetition of digits)

Digits	Greatest number	Smallest number
5, 0, 9		
6, 3, 7		
4, 0, 1		
9, 9, 0		

2. Complete the following number sequence.

111, 222, 333, 444, …………, …………, …………

150, 155, 160, 165, …………, …………, …………

210, 310, 410, 510, …………, …………, …………

333, 433, 533, 633, …………, …………, …………

21

3. Write the numerals from the expanded form.

a. 4 Hundreds; 5 Tens; 0 Ones ⬭

b. 3 Hundreds; 0 Tens; 1 One ⬭

c. 5 Hundreds; 8 Tens; 9 Ones ⬭

d. 8 Hundreds; 0 Tens; 5 Ones ⬭

4. Write the number names.

Numeral	Number name
156	
340	
408	
696	

5. Fill in the blanks.

a. 405 has ____ Hundred ____ Tens ____ ones

b. 547 has ____ Hundred ____ Tens ____ ones

c. 680 has ____ Hundred ____ Tens ____ ones

6. Write the place value for the bubbled digits.

a. 1 9 8   _____

b. 9 0 8   _____

c. 5 4 3   _____

6. Write down the odd and even numbers seperately.

123   333   422   588   246   535
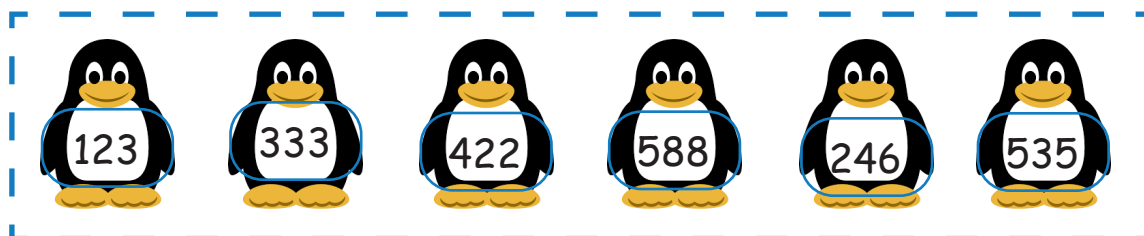
a. Odd numbers: ____   ____   ____

b. Even numbers: ____   ____   ____

8. write <, >, = in the box.

105 ⬭ 150	761 ⬭ 683
419 ⬭ 547	660 ⬭ 660
394 ⬭ 387	983 ⬭ 990

PH9MRU

9. Write the numbers in ascending and descending order.

326   323   301   356   365   399   308   340

Ascending order: ▢ ▢ ▢ ▢ ▢ ▢ ▢ ▢

Descending order: ▢ ▢ ▢ ▢ ▢ ▢ ▢ ▢

10. Using the digits 6, 8 and 5 only once write the greatest and smallest 3 digit number.

Greatest number: ▢   Smallest number: ▢

2.4 Addition and Subtraction.

Addition

Recall

a. 70 + 35 = ▢

b. 68 + 23 = ▢

c. 51 + 37 = ▢

d.   55 + 18 = ⬭

e.   56
    +33
    ‾‾‾‾
    ‾‾‾‾

f.   57
    +33
    ‾‾‾‾
    ‾‾‾‾

g.   70
    +35
    ‾‾‾‾
    ‾‾‾‾

Addition of Three Digit Numbers (Without Regrouping)

Example:

Add 132 and 241

So using abacus, first put 132 as:

then add 241, as 2 more in hundred, 4 more in tens and 2 more in ones.

	H	T	O
	1	3	2
+	2	4	1

H	T	O
1	3	2

H	T	O
3	7	3

Answer of addition of two or three numbers is called **sum of the numbers**.

sum = 373

Example: Add 342 + 515 + 12

	H	T	O
	3	4	2
+	5	1	5
		1	2

step 1: add ones

	H	T	O
	3	4	2
+	5	1	5
		1	**2**
			9

step 2: add tens

	H	T	O
	3	4	2
+	5	1	5
		1	2
		6	**9**

step 3: add hundreds

	H	T	O
	3	4	2
+	5	1	5
		1	2
	8	**6**	**9**

Sum = 869

Try this Add the following numbers

1.
	H	T	O
	4	4	1
+	3	2	6
			2

2.
	H	T	O
	5	6	2
+	2	0	4

3.
	H	T	O
	8	1	5
+	1	5	3
		2	1

4. 34 + 452 + 3

Addition of Three Digit Numbers (With Regrouping)

Example: Add 556 and 194

Add ones

	H	T	O
		1	
+	5	5	6
	1	9	4
			0

$6 + 4 = 10$ Ones $= 1$ Ten

With regrouping.

10 ones $= 1$ Ten $+ 0$ ones

So, we put 0 in ones place and carry over 1 to ten place.

Add Tens

	H	T	O
		1	
+	5	5	6
	1	9	4
		5	0

$1 + 5 + 9 = 15$ tens

15 tens $= 1$ hundred $+ 5$ tens

So, we put 5 in tens place. And carry over 1 to hundred place.

Add hundreds

	H	T	O
	1	1	
+	5	5	6
	1	9	4
	7	5	0

$1 + 5 + 1 = 7$ hundred
So, we put 7 in hundreds place.

Sum = **750**

Try this

Add the following numbers.

a.
```
   7 0 9
 + 2 6 1
 _____
```

b.
```
   3 3 9
 + 2 0 2
     2 8
 _____
```

c.
```
   5 0 8
 + 5 6 2
   4 4 0
 _____
```

d. 921+20+61

e. 28+195+6

25

SUBTRACTION

Recall:

a. $45 - 35 = \square$

b. $87 - 69 = \square$

c. $49 - 38 = \square$

d. $99 - 55 = \square$

e.
$$\begin{array}{r} 63 \\ -\ 17 \\ \hline \end{array}$$

f.
$$\begin{array}{r} 70 \\ -\ 9 \\ \hline \end{array}$$

Subtracting

Subtraction of Three Digit Numbers (Without Regrouping)

Example:

Subtract 344 from 845

Remove 3 from hundreds, 4 from tens and 4 from ones as

	H	T	O
	8	4	5
−	3	4	4

H	T	O
8	4	5

H	T	O
5	0	1

Answer of subtraction of two numbers is called **difference of the two numbers**.

Difference = 501

2DVHGQ

Example: Subtract 213 from 735

Subtract ones					Subtract tens				Subtract hundreds			

	H	T	O
	7	3	5
−	2	1	3

	H	T	O
	7	3	5
−	2	1	3
			2

	H	T	O
	7	3	5
−	2	1	3
		2	2

	H	T	O
	7	3	5
−	2	1	3
	5	2	2

Difference = 522

Try this

Subtract the following numbers.

a.

	H	T	O
	5	4	4
−		2	3

b.

	H	T	O
	7	6	5
−	4	0	1

c.

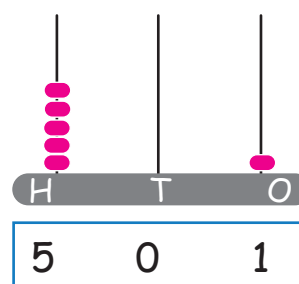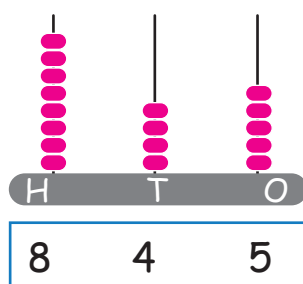|	H	T	O
	8	4	5
−	2	3	4

Subtraction of Three Digit Numbers (With Regrouping)

Example: Subtract 138 from 264

	H	T	O
	2	6	4
−	1	3	8

Step:1
Subtract ones

	H	T	O
		5	14
−	2	6	4
	1	3	8
			6

14 − 8 = 6

Step:2
Subtract tens

	H	T	O
		5	14
−	2	6	4
	1	3	8
		2	6

5 − 3 = 2

Step:3
Subtract hundreds

	H	T	O
	1	5	14
−	2	6	4
	1	3	8
	1	2	6

2 − 1 = 1

We cannot subtract 8 from
14. so regroup
1 ten from 6 tens into 10 ones.

Subtract the following numbers.

a.
```
    5  4  0
 −  3  5  3
```

b.
```
    7  6  5
 −  4  3  8
```

c.
```
    8  0  5
 −  2  4  6
```

Addition and subtraction by using standard algorithm

Example: Add 675 and 136

Step:1

Add ones:

H	T	O
	1	
6	7	5
+ 1	3	6
		1

Step:2

Add tens

H	T	O
	1	
6	7	5
+ 1	3	6
		1 1

$5 + 6 = 11$ ones,

11 ones $= 1$ tens $+ 1$ one put 1 in ones place and carry over 1 to tens place.

$1 + 7 + 3 = 11$ tens

11 tens $= 1$ hundred $+ 1$ tens. put 1 in tens place and carry over 1 to hundreds place.

Step:3

Add hundreds

H	T	O
1	1	
6	7	5
+ 1	3	6
8	1	1

Puzzle

I am a 3 digit number. If you add 5 tens with me, I will become greatest 3 digit number Find me.

$1 + 6 + 1 = 8$ hundreds

put 8 in hundreds place

Teacher's note: Teacher can help the children to do the Addition problems by using **abacus kit**.

Example:

Subtract 386 from 724

Step:1

Subtract ones

	H	T	O
		1	14
	7	2̸	4̸
+	3	8	6
			8

Borrow 1 ten from 2 tens then add to 4 ones we get 14 in one's place.

$$14 - 6 = 8$$

Step:2

Subtract tens

	H	T	O
		11	
	6	1	14
+	7̸	2̸	4̸
	3	8	6
		3	8

Borrow 1 hundred from 7 hundreds then add to 1 ten we get 11 in ten's place.

$$11 - 8 = 3$$

Step:3

Subtract hundreds

	H	T	O
		11	
	6	1	14
+	7̸	2̸	4̸
	3	8	6
	3	3	8

$$6 - 3 = 3$$

Difference = 338

Play with numbers

choose any 3 numbers Frame a 3- digit numbers and reverse it. Find their sum and difference.

Subtraction

minus sign

Daily life situation involving addition and subtraction.

i. 452 Mangoes are grown in farm A and 349 in farm B. Find the total number of mangoes grown in both farms.

Mangoes in farm A   =   452

Mangoes in farm B   =   349

Total number of mangoes   =   801

ii. Amuthan saved rupees 125 on the first day and rupees 200 in the second day. Find the total amount saved by him in two days

The first day saving   =

The second day saving   =

Total saving   =

iii. Kumar earned rupees 800 in a day and spent rupees 450. Find the amount saved by him.

His one day income   =

Amount spent   =

Savings amount   =

Try this

There were 10 egg trays each with 10 eggs in Valavan's egg shop. He sold eggs in 3 trays and found that eggs in 2 trays were rotten. find the number of eggs remaining in Valavan's shop.
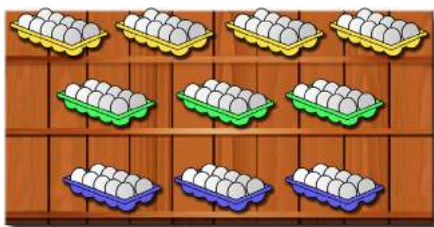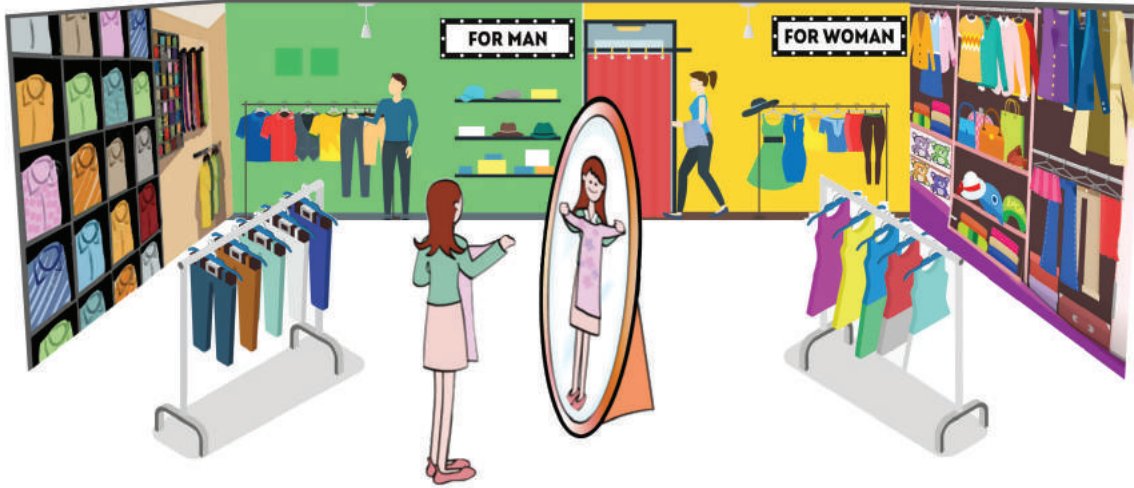
Total number of eggs in Valavan's shop= _____.

Number of eggs sold + number of eggs rotten = ____+_____ =_____.

Number of eggs remaining in the shop = _____.

Frame questions for addition and subtraction for the picture below. One is done for you.

1. Rani chose 2 tops from the hanger and 3 tops from the rack. Find the total number of shirts chosen by her?

2.

Frame the questions related to the given addition and subtraction facts.

| 281 +240 = ? | A dairy booth sells 281 bottles of milk on first day and 240 bottles of milk on second day. Find the total number of bottles sold on both the days. |

| 352 - 148 = ? | There are 352 oranges on a tree 148 oranges were plucked from the tree. How many oranges are remaining in the tree ? |

Practice Frame questions for the given addition and subtraction facts.
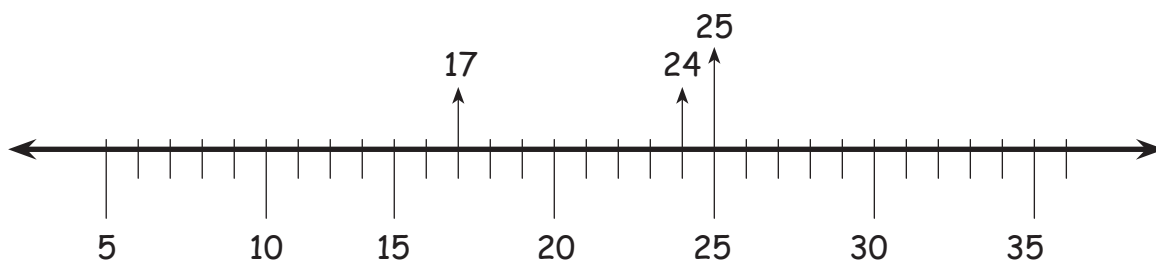
i. 118 + 212 = ?   ii. 717-515= ?

iii. 200 + 300 = ?   iv. 243 - 169 = ?

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2.5 Estimation

Estimate the sum and difference of the two given numbers by rounding off to nearest 10s and 100s.

Let us round off three numbers 17, 24 and 25 to the nearest 10s.

- We can see that 17 is between 10 and 20 but it is closer to 20 than 10. So, 17 is rounded off to 20.

- 24 is between 20 and 30 but is closer to 20 than 30. So, 24 is rounded off to 20.

- 25 is between 20 and 30. But it is exactly on the middle point. So, 25 is rounded off to 30.

We can easily estimate the sum and difference of any 2 number by rounding off them to nearest values and adding or subtracting them.

Example:

1. **Estimate the sum by rounding off to the nearest value and find the actual sum.**

Problems	Estimated Answer	Actual Answer
24	20	24
+ 27	+ 30	+ 27
sum	50	51

2. **Estimate the difference by rounding off to the nearest value and find the actual difference.**

Problems	Estimated Answer	Actual Answer
15	20	15
− 13	− 10	− 13
Difference	10	2

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Practice

1. Find the sum and difference of the following.

a.
```
  8 0 3
+ 2 3 7
───────
```

b.
```
  6 5 4
+ 2 0 9
───────
```

c.
```
  4 9 3
+ 1 3 5
───────
```

d.
```
  9 8 1
− 1 6 5
───────
```

e.
```
  5 1 8
− 1 3 9
───────
```

f.
```
  7 8 2
− 3 7 5
───────
```

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2. Round off to the nearest 10.

a. 19_____   b. 25 _____   c. 21_____   d. 47_____

3. Estimate the sum to the nearest ten and also find the actual sum.

Problems	Estimated Answer	Actual Answer
33	30	
+ 35	+ 40	
sum		

Problems	Estimated Answer	Actual Answer
26		
+ 31		
sum		

4. Estimate the difference to the nearest ten and also find the actual difference.

Problems	Estimated Answer	Actual Answer
50		
− 41		
Difference		

Problems	Estimated Answer	Actual Answer
28		
− 22		
Difference		

Teacher's note: The teacher should be prepared to give a variety of questions, puzzles, and activities according to the skills of the students.