Unit 1

Numbers

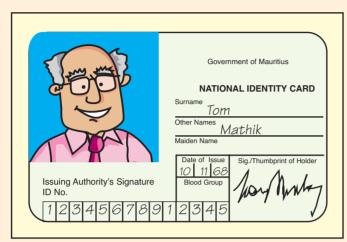
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Objectives

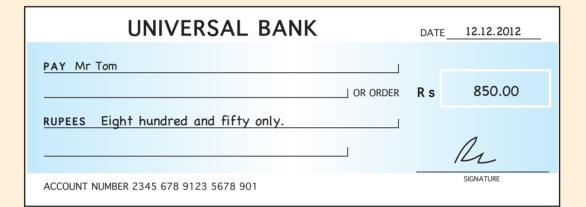
By the end of this unit, you should be able to:

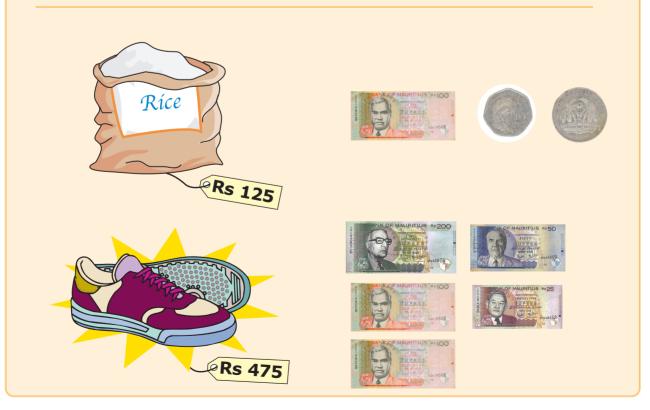
- count, read and write numbers up to 1000.
- count forward, count backward and skip count.
- compare and order numbers.
- read and write ordinal numbers.
- represent numbers using manipulatives.
- write numbers in expanded form and vice versa.
- perform simple mental arithmetic operations.

Using Numbers









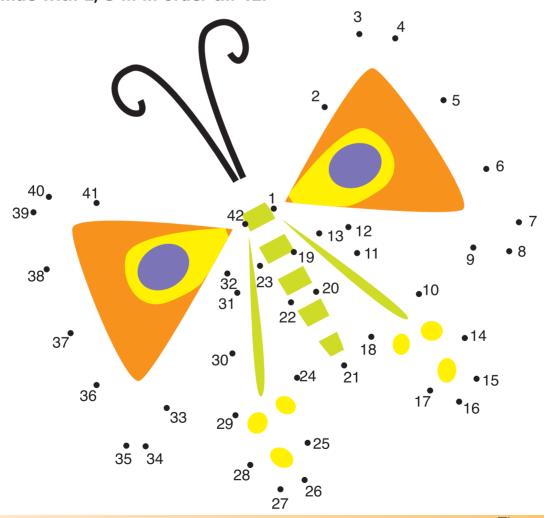
Counting

Read the numbers in the Hundred's Chart below.

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Dot Game based on numbers.

Complete the figure below by joining dot to dot. Start at number 1 and continue with 2, 3 \dots in order till 42.



1. Complete the following.

(a) 100, 101, 102, ____, ___, 106, ____, 110

(f) 670, ____, ___, ___, ___, ___, ___, 678, ____, ___

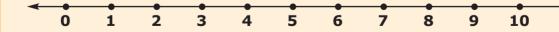
(h) 810, ____, 813, ____, ___, ___, ___, ___, ____, ____, ____

(i) 930, ____, ___, ___, 940

(j) 990, ____, ___, 1000

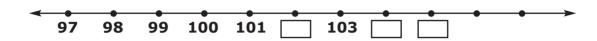
Number Line

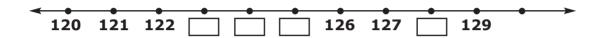
Numbers can be represented on a number line.

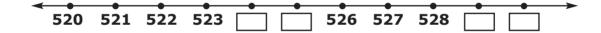


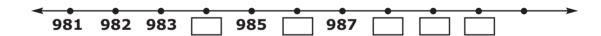
Counting

2. Write the missing numbers on the number lines below.











Number Names

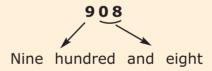
Read the following numbers and their corresponding number names.

1	One	11	Eleven	10	Ten	100	One hundred
2	Two	12	Twelve	20	Twenty	200	Two hundred
3	Three	13	Thirteen	30	Thirty	300	Three hundred
4	Four	14	Fourteen	40	Forty	400	Four hundred
5	Five	15	Fifteen	50	Fifty	500	Five hundred
6	Six	16	Sixteen	60	Sixty	600	Six hundred
7	Seven	17	Seventeen	70	Seventy	700	Seven hundred
8	Eight	18	Eighteen	80	Eighty	800	Eight hundred
9	Nine	19	Nineteen	90	Ninety	900	Nine hundred
10	Ten	20	Twenty	100	One hundred	1000	One Thousand

Writing in Words

Two hundred and fifty three

5 4 3
Five hundred and forty three



3. Write in words.

(a) 25 : twenty five

(b) 45 : _____

(c) 59 : _____

(d) 75 : _____

(e) 114 : _____

Counting

- (f) 201 : _____
- (g) 311 : _____
- (h) 413 : _____
- (i) 530 : _____
- (j) 612 : _____
- (k) 715 : _____
- (I) 818 : ____

4. Write in figures.

- (a) Two hundred and seventeen: 217
- (b) One hundred and seven : _____
- (c) Four hundred and forty four : _____
- (d) Three hundred and thirteen: _____
- (e) Six hundred and thirty:
- (f) Nine hundred and seventy eight : _____

5.	Fill in the	given	cheques.	An example	e, cheque	(a),	has	been	done	for	you.
----	-------------	-------	----------	------------	-----------	------	-----	------	------	-----	------

5.	Fill in the given cheques. An example, cheque (a),	has be	en done for yo
(a)	UNIVERSAL BANK	DATE _	07/01/2012
	PAY Mr Tom Thomas		
	OR ORDER	Rs	237.00
	RUPEES Two hundred and thirty seven only		
			R
	ACCOUNT NUMBER 1234 567 890 1234 567	_	SIGNATURE
(b)	UNIVERSAL BANK	DATE	
	PAY Mrs	DATE -	
		Rs	620.00
	RUPEES		
	ACCOUNT NUMBER 2345 678 901 2345 678		SIGNATURE
(c)	LINUX/EDCAL DANIK		
()	UNIVERSAL BANK	DATE _	
	PAY Mr	D.o.	705.00
	OR ORDER	KS	700.00
	RUPEES		
	ACCOUNT NUMBER 3456 789 012 3456 789	<u> </u>	SIGNATURE
(-1)	70000HT NOMBER 3 130 7 03 012 3 130 7 03		
(d)	UNIVERSAL BANK	DATE -	
	PAY Mrs		470.00
	OR ORDER	Rs	678.00
	RUPEES		
	ACCOUNT NUMBER 4567 890 123 4567 890		SIGNATURE
(e)	UNIVERSAL BANK	DATE -	
	PAY Mr		
	OR ORDER	Rs	999.00
	RUPEES		

SIGNATURE

ACCOUNT NUMBER 5678 901 234 5678 910

Counting

Before, after, in between



..., 20, 21, 22, 23, 24 are **before** 25.

26, 27, 28, 29, 30, ... are **after** 25.

23, 24, 25, 26, 27 are **in between** 22 and 28.

1. Which whole number comes immediately after the given numbers.

(a) 425, _____

(e) 299, _____

(b) 537, _____

(f) 899, _____

(c) 649,_____

(g) 699, _____

(d) 259, _____

(h) 999, _____

2. How many 9's are there between 1 and 100.

3. The numbers 501 to 600 are listed below.

501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520
521	522	523	524	525	526	527	528	529	530
531	532	533	534	535	536	537	538	539	540
541	542	543	544	545	546	547		549	550
551	552	553	554	555	556	557	558	559	560
561	562	563		565	566	567	568	569	570
571	572	573	574	575	576	577	578	579	580
581	582	583	584	585	586	587	588	589	590
591	592	593	594	595	596	597		599	600

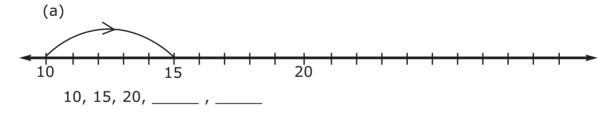
- (a) Which whole number is hidden by the
- ? _____
- (b) Which whole number comes after the

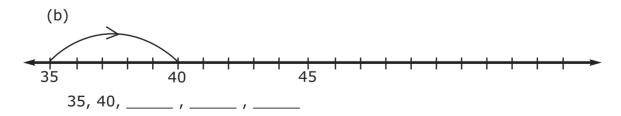


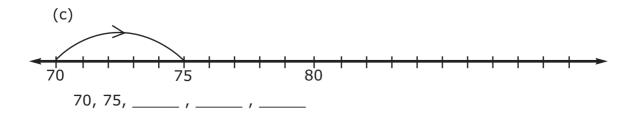
- (c) Which whole number is before the ? _____
- (d) Which whole numbers are between 558 and 563?
- (e) Start at , count and write four numbers forward, ____ , ___ , ___ , ___
- (f) Start at , count and write four numbers backward, ____ , ___ , ___ , ___ ,
- (g) Start at ____ , count and write two numbers forward, ____ , ___
- (h) Begin at ____, count and write three numbers backward, ___, ___, ___

Skip Counting I count in fives. Skip Counting 1 count in fives.

4. Count in fives and write the missing numbers.







Counting

5. The numbers 1-100 are listed below.

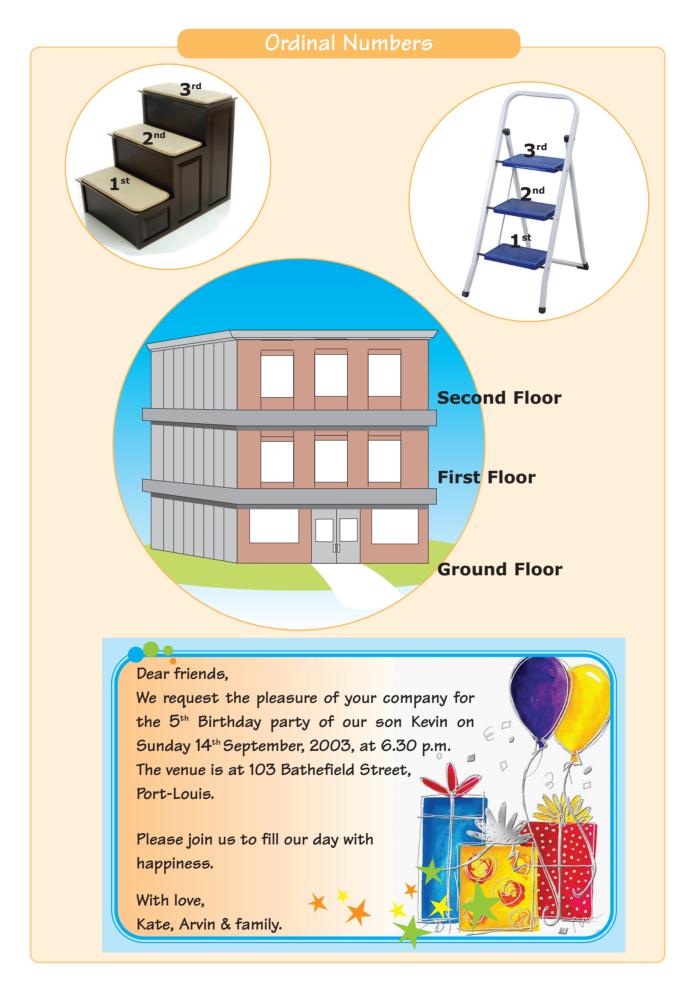
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- (a) Start at 2 and count in twos.
- (b) Circle every number that you counted and describe the pattern.

6. The numbers 401-500 are listed below.

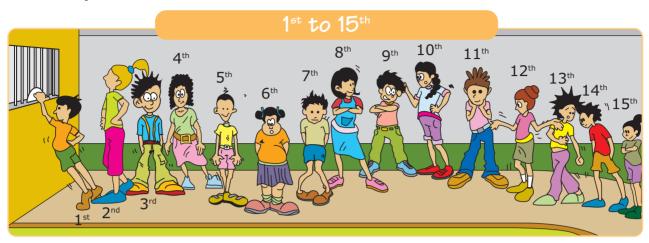
401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500

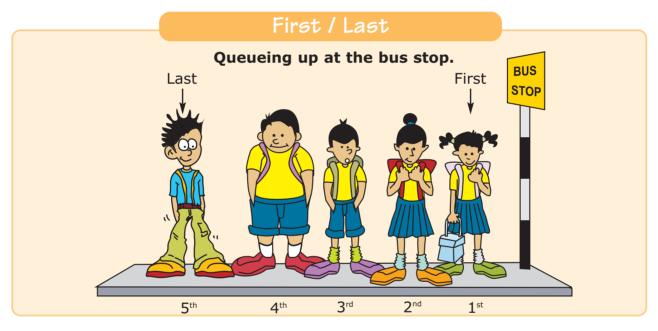
- (a) Start at 401 and count in threes.
- (b) Circle every number that you counted and describe the pattern.

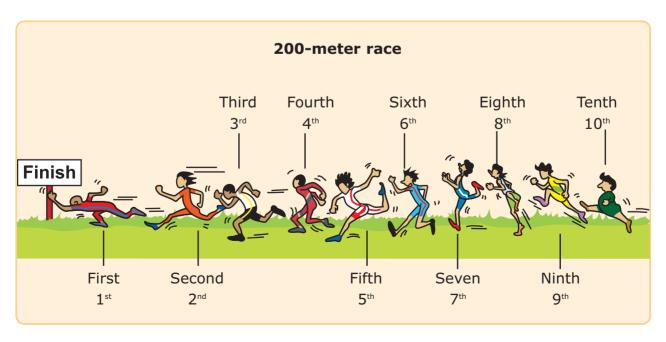


Ordinal Numbers

The picture shows pupils lining up to buy tickets at the theatre. Each pupil has a position.







		Rea	d and remembe	r.	
1 st	First	11 th	Eleventh	30 th	Thirtieth
2 nd	Second	12 th	Twelfth	40 th	Fortieth
3 rd	Third	13 th	Thirteenth	50 th	Fiftieth
4 th	Fourth	14 th	Fourteenth	60 th	Sixtieth
5 th	Fifth	15 th	Fifteenth	70 th	Seventieth
6 th	Sixth	16 th	Sixteenth	80 th	Eightieth
7 th	Seventh	17 th	Seventeenth	90 th	Ninetieth
8 th	Eighth	18 th	Eighteenth	100 th	Hundredth
9 th	Ninth	19 th	Nineteenth		
10 th	Tenth	20 th	Twentieth		

Ordinal Numbers

Reading a calendar.



January

J un	/V\ on	I ue	VV ed	I hu	I ⊤ri	S at
				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. Complete the calendar by writing the missing ordinal numbers.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
				(1 st)	(2 nd)	(3 rd)
4	5	6	7	8	9	10
()	()	()	()	()	()	()
11	12	13	14	15	16	17
()	()	()	()	()	()	()
18 (<u> </u>)	19 (<u> </u>)	20 (<u> </u>)	21 ()	22 (<u> </u>)	23 (<u> </u>)	24 (<u> </u>)
25	26	27	28	29	30	31
()	()	()	()	()	()	()

2. Complete.

1 st	First	11 th	
2 nd	Second	12 th	Twelfth
3 rd	Third	13 th	
4 th	Fourth	14 th	
5 th	Fifth	15 th	
6 th		16 th	
7 th		17 th	
8 th		18 th	
9 th		19 th	
10^{th}		20 th	Twentieth

3. Write the missing ordinal numbers.

40 th	41 st		
		47 th	
50 th			

4. Starting from the top,

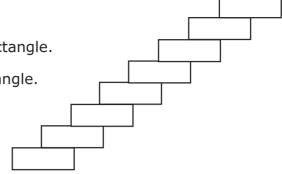
- (a) circle the 3rd button red.
- (b) tick the 8th button.
- (c) cross the 5th button.



Ordinal Numbers

5. Starting from bottom,

- (a) write your name in the first rectangle.
- (b) draw a flower in the sixth rectangle.
- (c) colour the seventh rectangle.



6. Starting from the left,

1.	tick ($$) the sixth (6 $^{ t t}$) ball	
2.	tick ($$) the third (3 rd) square	
3.	cross (x) the fourth and tenth triangles	
4.	ring the seventh (7 th) pencil	
5.	circle the second (2 nd) and eighth (8 th) flowers	****

7. Starting from the right,



- (a) colour the T-Shirt of the fifth boy red.
- (b) draw a hat on the head of the first boy.
- (c) tick the sixth boy.
- (d) cross the last boy.

Fill in the blanks with: second, first, last, eleventh

(a) "A" is the _____ letter of the alphabet.

(b) Tuesday is the _____ day of the school week.

(c) December is the _____ month of the year.

(d) November is the _____ month of the year.

9.



Starting from the right,

- (a) Name the boy standing in the third position. _____
- (b) What is the position of Suzan? _____
- (c) Who is standing in between the 4th and 6th pupils? _____
- (d) What is the rank of the last pupil? _____

10. The results of a 200-meter race is shown in the table below. Write the rank of each runner in the table.

Kevin	24 seconds	
Nawaz 21 seconds		
Rajen	23 seconds	
Kiran	20 seconds	
Raj	25 seconds	

Ordinal Numbers

11. Look at the calendar below and answer the questions that follow:



December

Sun	Mon	Tue	W_{ed}	T_{hu}	F_{ri}	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

- (a) What day is five days after the 3rd?
- (b) What date is ten days after the 5th?
- (c) If you start on Tuesday and count on seven days, what is the day?
- (d) If you start on Friday 2nd December and count back four days, what is the day?
- (e) If you start on the 23rd and count back fifteen days, what is the date?
- (f) What day and date is eight days before the 25th?
- (g) What day and date is seven days after the 12th?

Place Value

Numbers can be expressed in terms of units, tens and hundreds. Two illustrative examples are given below.

(a) Rs 523



Rs 20



Rs 3

Rs 523



Rs 500





















We can write

$$(5 \times 100)$$
 + (2×10) + (3×1)

(b) We can interpret 352 in the same way.

Rs 352







 $352 = (3 \times 100)$















(5 x 10)

 (2×1)

Place Value

1. Complete the following.

(a) Rs 225









(b) Rs 555













(c) Rs 154





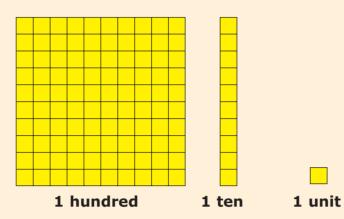




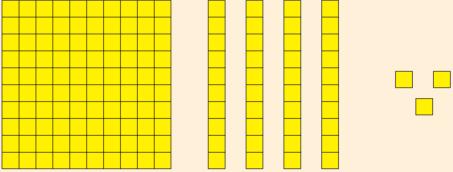




Numbers can also be represented using base 10 blocks.



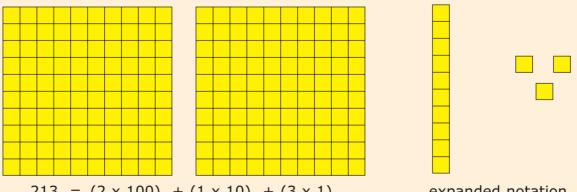
Example 1:



Example 2:

$$213 = 200 + 10 + 3$$

= $(2 \times 100) + (1 \times 10) + (3 \times 1)$



Place Value

2. Using squared paper, make cut-outs of hundreds, tens and units. Use the cut-outs to represent the following:

(a)
$$235 =$$

(b)
$$333 =$$

(c)
$$104 =$$

3. Write in expanded notation.

Abacus

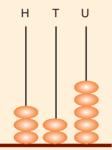
We can also represent numbers on an abacus.

In 325, 3 has the value of 3 hundreds;

2 has the value of 2 tens;

and 5 has the value of 5 units.

325 is represented on a picture abacus as shown below.



Key

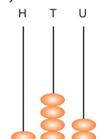
U : Units

T : Tens

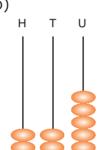
H : Hundreds

4. Write in figures.

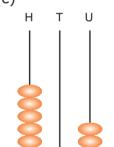




(b)



(c)



5. Draw picture abacuses to represent

(a) 524

(b) 340

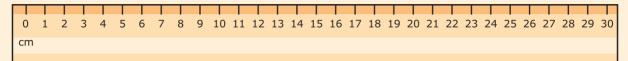
(c) 904

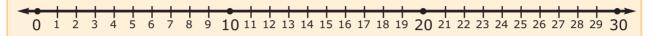
(d) 476

Comparison of Numbers



Observe the sequence of numbers on your ruler.





Observe that Similarly,

2 **is smaller than** 5. 13 **is smaller than** 17. 2 **<** 5 13 **<** 17

Observe that Similarly,

9 **is greater than** 6. 15 **is greater than** 13 **9 >** 6 15 **>** 13

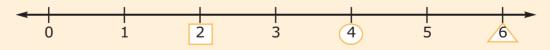
Smaller than / Bigger than

The terms | greater

larger bigger are represented by >

The terms

smaller less than are represented by <



2 is on the **left** of 4

2 is **smaller** than 4. We write 2 < 4

6 is on the **right** of 4.

6 is **bigger** than 4. We write 6 > 4

Comparing Numbers

To compare two numbers we first consider the digit on the left of each number.

Example: Compare the numbers 53 and 35. Which number is bigger? Which number is smaller?

5 in 53 is 5 tens.

3 in 35 is 3 tens.

5 tens is more than 3 tens

Hence 53 is greater than 35 or 53 > 35

And 35 is smaller than 53 or 35 < 53

- 1. Compare the numbers. Write the correct symbol <, >, =.
 - (a) 15 _____ 16
 - (b) 22 _____ 11
 - (c) 18 _____ 8
 - (d) 71 _____ 17
- 2. Compare the numbers. Write the correct symbol <, >, = .
 - (a) 25 _____ 40

(b) 54 _____ 81

(c) 86 _____ 68

(d) 270 ____ 270

(e) 672 _____ 267

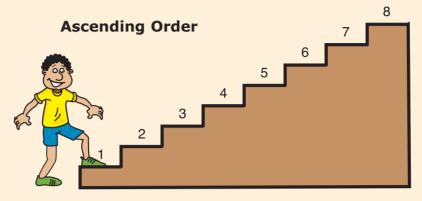
(f) 549 ____ 945

(g) 525 _____ 525

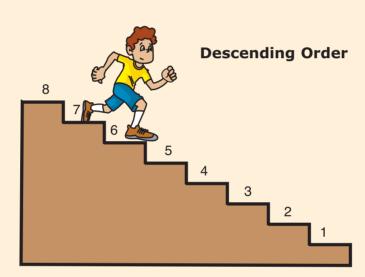
(h) 903 ____ 309

Ordering Numbers

Ascending and Descending order



The numbers 1, 2, 3, 4, 5, 6, 7, 8 are in ascending order.



The numbers 8, 7, 6, 5, 4, 3, 2, 1 are in **descending** order.

- **3. Write the following numbers in ascending order** (i.e., starting from the smallest to the largest)
 - (a) 63, 19, 37, 98
 - (b) 654, 587, 869, 292
- **4. Write the following numbers in descending order** (i.e., starting from the largest to the smallest)
 - (a) 327, 932, 428, 609
 - (b) 109, 756, 329, 671

Place Value Dice Game



Activity 1: Constructing the smallest number.

The objective of this game is to determine the smallest number possible when 3 dice are rolled.

Materials required: 3 dice, place value recording sheet (see Table 1 below)

Number of players: 4

Procedure:

This game requires 4 players, A, B, C and D. The responsibility of player A is to roll the dice, verify the players' answers and record the scores of the players B, C and D in the score sheet below. A correct answer obtains a score of 10 marks. An incorrect answer gets zero mark.

	Game 1	Game 2	Game 3	Game 4	Game 5	Total
Player B						
Player C						
Player D						

Table 1. Score Sheet (for player A)

2. A place value recording sheet (Table 2) is given to each of the players **B**, **C** and **D**.

Place Value

	Hundreds	Tens	Units
Game 1			
Game 2			
Game 3			
Game 4			
Game 5			

Table 2. Place value recording sheet.

- 3. Player A rolls the 3 dice together.
- **4.** Player **B**, **C** and **D** construct the smallest 3-digit number from the dice and record it in their respective sheets.
- **5.** Player **A** rolls the 3 dice 4 more times. Each time the students have to construct and record the smallest number in their place value recording sheet.
- **6.** The player with the highest score is the winner.

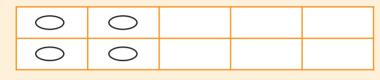
Activity 2: The game can be modified to find the greatest 3-digit number.

Mental Arithmetic

A ten frame is a grid consisting of ten partitions, as shown below.



We can represent number four as follows:



4 is double 2



4 is 1 less than 5 4 is half of 8

In the same way, we can represent five as follows:



5 is half of 10



5 is one more than 4 5 is double 2 and 1

Consider the representations of eight:

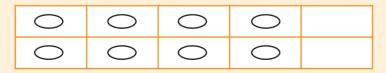


8 is 5 and 3 more

8 is 5 + 3

8 is 6 + 2

8 is 2 less than 10



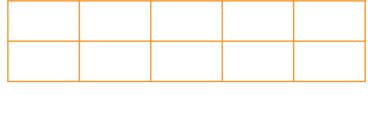
8 is double 4

8 is 4 groups of 2

Mental Arithmetic

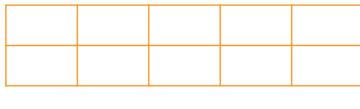
1. Represent the numbers 6 and 7 in different ways on a ten-frame.

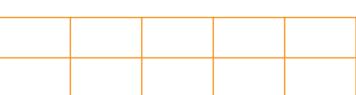
Number 6





Number 7





Know your number facts

Knowing doubles allows you to perform arithmetic operations faster.

Know your number facts

Similarly, you should know pair of numbers which add up to 5.

Sum of 5

$$3+2=5$$

Pairs of numbers which add up to 10 are also useful.

Sum of 10

5+5=10

Two-stage addition

We can add two numbers using the doubles.

Example 1:
$$5+6=5+5+1$$

= $10+1=11$
Example 2: $7+8=7+7+1$
= $14+1$

2. Workout the following addition in two stages.

(a) 6 + 7

- (b) 8 + 9
- (c) 5 + 7

Mental Arithmetic

More 'friendly' pairs

$$11+9 = 20$$

$$12+8 = 20$$

$$13+7 = 20$$

$$14+6 = 20$$

$$15+5 = 20$$

$$16+4 = 20$$

$$17+3 = 20$$

$$18+2 = 20$$

$$19+1 = 20$$

$$41+9 = 40 + 10 = 50$$

$$42+8 = 40 + 10 = 50$$

$$43+7 = 40 + 10 = 50$$

$$44+6 = 40 + 10 = 50$$

$$45+5 = 40 + 10 = 50$$

$$46+4 = 40 + 10 = 50$$

$$47+3 = 40 + 10 = 50$$

$$48+2 = 40 + 10 = 50$$

$$49+1 = 40 + 10 = 50$$

Two-stage addition

We can add two numbers using the 'friendly' pairs.

$$15 + 8 = 15 + 5 + 3$$

$$= 20 + 3 = 23$$

$$16 + 14 = 16 + 4 + 10$$

$$= 20 + 10 = 30$$

$$13 + 47 = 10 + 3 + 47$$

$$= 10 + 50 = 60$$

Workout by two stage addition.

(b)
$$69 + 21$$
 (c) $82 + 18$

(c)
$$82 + 18$$

Subtraction by splitting

Often, we can perform subtraction by splitting the number being subtracted.

Example 1 Consider 12 – 5

We split 5 such that it contains the number 2.

5 = 2 + 3

First we subtract 2. Then we subtract 3

12 - 2 = 10

10 - 3 = 7

Thus, 12 - 5 = 7.

Example 2 43 – 7

We split 7 such that it contains the number 3.

7 = 3 + 4

First we subtract 3. Then we subtract 4.

43 - 3 = 40

40 - 4 = 36

Thus, 43 - 7 = 36.

4. Workout the subtraction by spliting.

(c)
$$43 - 7$$

Mental Arithmetic

Subtraction involving 9

To subtract 9 from a number, we first subtract 10, then we add 1.

Example 1 21 – 9

9 is one less than 10

We subtract 10 and then add 1.

21 - 10 = 11

11 + 1 = 12

Thus, 21 - 9 = 12.

Example 2 47 – 9

We subtract 10 and then add 1.

47 - 10 = 37

37 + 1 = 38

Thus, 47 - 9 = 38.

5. Workout

(c)
$$65 - 9$$

Continuous Assessment

1. Write in words

(a) 10 : _____

(b) 12 : _____

(c) 113 : ____

(d) 445 : _____

(e) 536 : _____

(f) 750 : _____

2. Write in figures.

(a) Eleven : _____

(b) One hundred and twenty three : _____

(c) Nine hundred and three:

(d) Eight hundred and fifty six :

(e) Seven hundred and seventy seven : _____

3. Complete.

(a) 2, 4, ____, 10.

(b) 3, 6, ____, ____, 18.

(c) ____, 10, ____, 25, ____, 35.

(d) 23, 20, 17, ____, ____, ____.

Continuous Assessment

4. Write in ascending order.

- (a) 7, 5, 1, 8, 4
- (b) 43, 1, 23, 79, 25
- (c) 213, 123, 312, 132, 231, 313

5. Write in descending order.

- (a) 13, 18, 15, 11, 19
- (b) 176, 213, 150, 500, 335
- (c) 567, 765, 657, 756, 576

6. (a) Circle the sixth ball, starting from the left.



















(b) Tick $(\sqrt{})$ on the 3rd square, starting from the right.



(c) Cross (x) the fifth and tenth triangles, starting from the left.



(d) Circle the ninth flower, starting from the right.



7. Write the symbol >, <, or = in the boxes below.

- (a) 5 10
- (b) 7 7
- (c) 18 8
- (d) 421 241
- (e) 403 43

8. Write True or False.

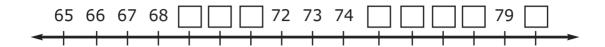
- (a) 124 < 312 _____
- (b) 53 **=** 35 ____
- (c) 12 > 5 _____
- (d) 17 = 17 _____
- (e) 921 **<** 219 _____

9. Write down the value of

- (a) 2 in 298. _____
- (b) 9 in 539. _____
- (c) 7 in 709.
- (d) 6 in 460. _____
- (e) 2 in 526. _____

Continuous Assessment

10. Complete the number line.



11. Complete the sequence.

- (a) 2, 5, 8, 11, ____, ____,
- (b) 27, 23, 19, 15, ____, ____,

12. The marks obtained by 6 students in a test are shown below.

Fill the table.

Student	Marks
Ken	9
Jeff	17
Anil	25
Shanti	48
Ali	39
Coomaren	30

Rank	Student
1 st	
2 nd	
3 rd	
4 th	
5 th	
6 th	

Profiling

	Numbers	Good	Satisfactory	Needs improvement
1.	Read numbers			
2.	Write numbers			
3.	Write in words			
4.	Count forward			
5.	Count backward			
6.	Skip counting			
7.	Compare numbers			
8.	Arrange numbers in ascending or descending order			
9.	Read and write ordinal numbers			
10.	Expand numbers/Place Value			
11.	Perform simple arithmetic operations mentally			

Teacher's Comments	Student's Progress
Signature of parent :	