

1 Numbers up to 9999

Get Going

1. Below are given some numbers. Write their number names.

a) 768 =

b) 231 =

c) 540 =

d) 699 =

e) 303 =



2. Below are given some number names. Write their numerals.

a) three hundred seventy-four =

b) four hundred fifty-five =

c) eight hundred two =

d) nine hundred =

e) one hundred ten =



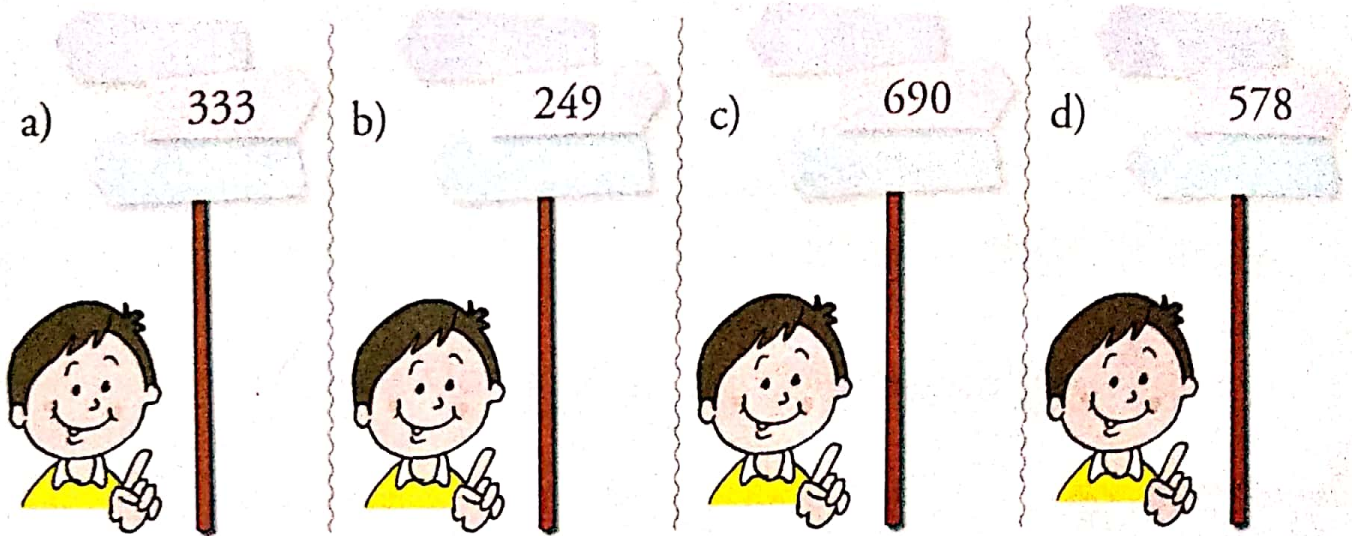
3. Write the numbers that come before and after the numbers given.

a) 333

b) 249

c) 690

d) 578



4. Write in the boxes the correct symbol, $<$, $>$ or $=$.

a) 439 760

b) 855 355

c) 622 622

d) 907 812

e) 341 672

f) 679 595



5. Write the following numbers in ascending order.

a) 789 303 511 911

b) 215 899 432 342

c) 666 165 543 645

6. Write the following numbers in descending order.

a) 203 858 570 764

b) 310 612 423 101

c) 125 165 543 645

7. Write the odd and even numbers in the correct boxes.

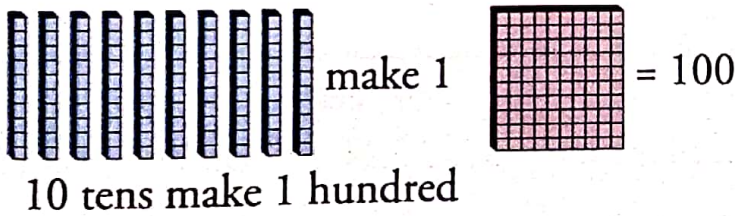
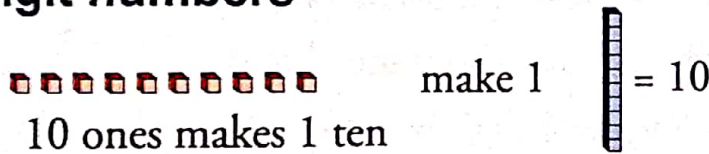
102	5	67	509	251	444	999	567	346	76
354	188	450	801	73	892	55	88	2	937

EVEN NUMBERS	

ODD NUMBERS	



4-digit numbers

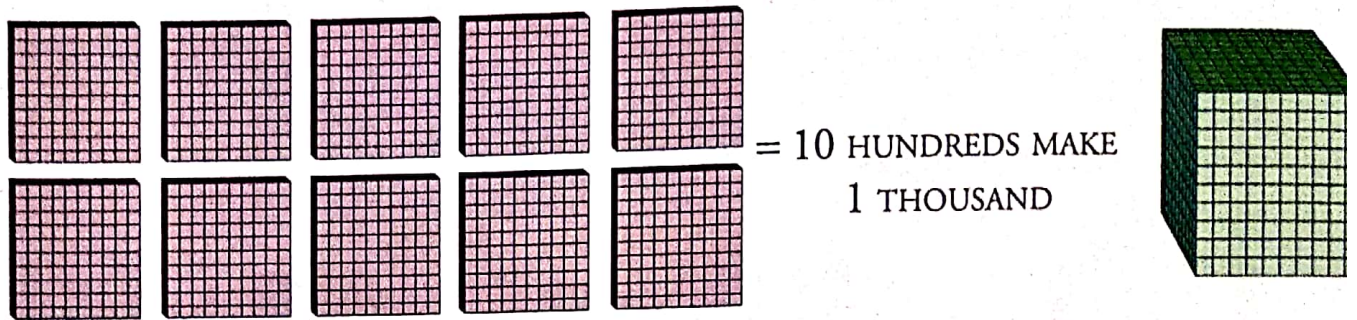


Now, let us add 1

$$\begin{aligned}
 999 + 1 &= 9 \text{ hundreds} + 9 \text{ tens} + 9 \text{ ones} + 1 \text{ one} \\
 &= 9 \text{ hundreds} + 9 \text{ tens} + 10 \text{ ones} \\
 &= 9 \text{ hundreds} + 9 \text{ tens} + 1 \text{ ten} \\
 &= 9 \text{ hundreds} + 10 \text{ tens} \\
 &= 9 \text{ hundreds} + 1 \text{ hundred} \\
 &= 10 \text{ hundreds} \\
 &= 1 \text{ THOUSAND}
 \end{aligned}$$

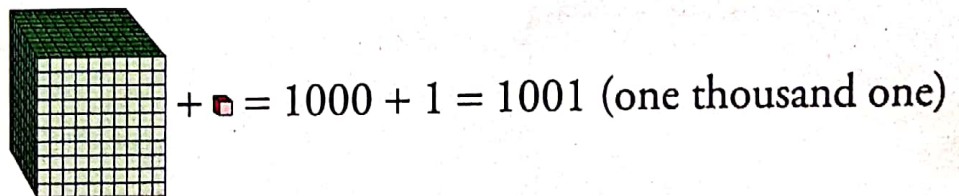
1 THOUSAND can be written as 1000.

1000 is the *smallest* 4-digit number.



To get any number greater than 1000, we must add 1 or more to it.

Example:



$$1000 + 2 = 1002 \quad (\text{one thousand two})$$

$$1000 + 3 = 1003 \quad (\text{one thousand three})$$

9999 is the *largest* 4-digit number.

Spot Check

Fill in the missing numbers.



2001							2008		
				2015					
									2030
		2033							
						2047			

Counting in thousands


 1000	1000	one thousand
 1000 + 1000	2000	two thousand
 1000 + 1000 + 1000	3000	three thousand
 1000 + 1000 + 1000 + 1000	4000	four thousand
 1000 + 1000 + 1000 + 1000 + 1000	5000	five thousand
 1000 + 1000 + 1000 + 1000 + 1000 + 1000	6000	six thousand
 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000	7000	seven thousand
 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000	8000	eight thousand
 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000	9000	nine thousand
 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000 + 1000	10000	ten thousand



Exercise 1


1. Fill in the missing numbers.

a)




6051									6060
				6065					
						6077			
		6083							
								6099	

b)



7701									
							7718		
			7724						
									7740
					7746				

c)



9951									
					9966				
								9979	
	9982								
		9993							

2. Count by 5s and write the numbers before/after the following.

a) 2450, _____, _____, _____

b) _____, _____, _____, 5084

3. Count by 10s and write the numbers before/after the following.

a) 7846, _____, _____, _____

b) _____, _____, _____, 8961

4. Count by 100s and write the numbers before/after the following.

a) 3669, _____, _____, _____, _____

b) _____, _____, _____, _____, 9844

Forming numbers

We represent the thousands place with Th.

1000 is the smallest 4-digit number.

Th	H	T	O
1	0	0	0

Example: 3749

$$3000 + 700 + 40 + 9$$

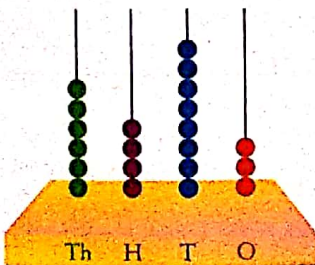
(3 thousands + 7 hundreds + 4 tens + 9 ones)

Th	H	T	O
3	7	4	9

Numbers on the abacus

Example: The abacus shows 6 thousands, 4 hundreds, 8 tens and 3 ones.

The abacus

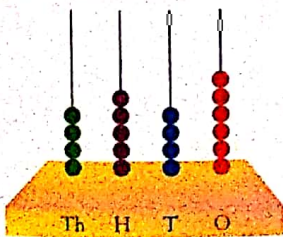


The number will be written as 6483.

In words, it is six thousand four hundred eighty-three.

Spot Check

Write the number on the abacus.



In numbers _____

In words _____

Life Skills

EXPERIENTIAL LEARNING

You can break a mobile number in three parts, for example, it can be remembered as XX XXXX XXXX. Remember the mobile numbers of your parents.



Exercise 2

1. Write the numerals of the number names.

a) seven thousand three hundred eighty-four _____

b) two thousand twenty-two _____

c) four thousand nine hundred thirty _____

d) one thousand five hundred sixteen _____

e) nine thousand eight hundred _____

2. Write the number names.

a) 4567 _____

b) 9097 _____

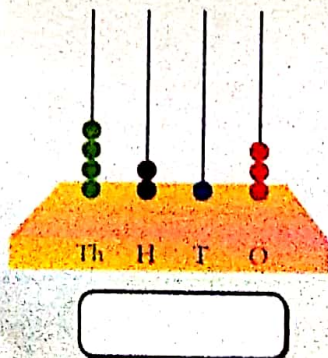
c) 1420 _____

d) 8010 _____

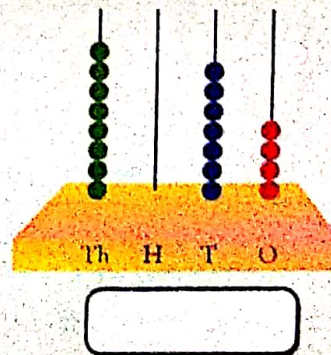
e) 6505 _____

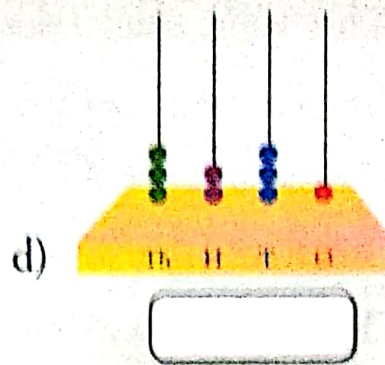
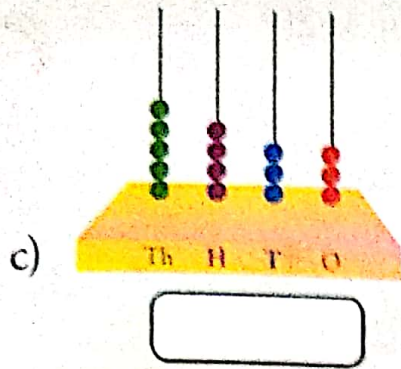
3. Count the beads on the abacus and write the numbers.

a)

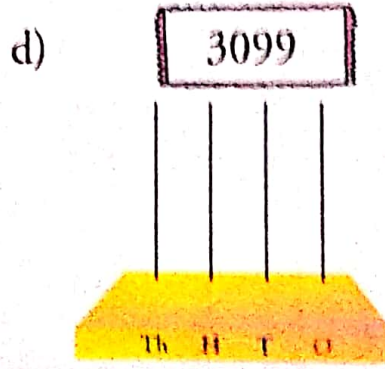
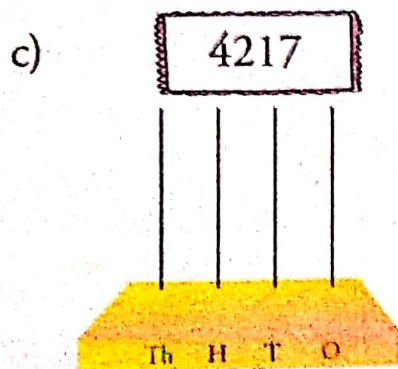
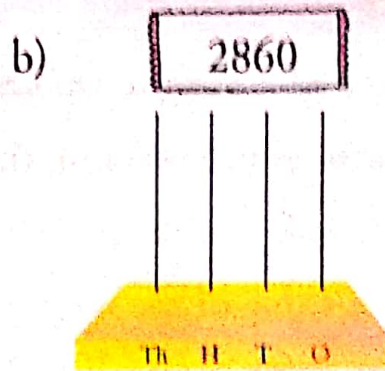
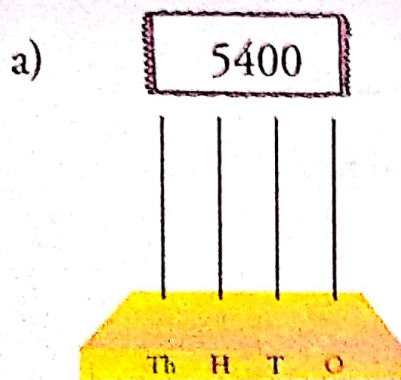


b)





4. Draw the beads on the abacus according to the numbers given.



Place value and face value

Place value

The place value of a digit depends on its position in the number.

As you move to the left in a number, the place value keeps increasing by ten times.

Example: What is the place value of the digits in 3420?

The place value of 0 is 0 ones, that is 0.

The place value of 2 is 2 tens, that is 20.

The place value of 4 is 4 hundreds, that is 400.

The place value of 3 is 3 thousands, that is 3000.



Maths Tip

The face value of a digit is always the same as the digit.

Face value

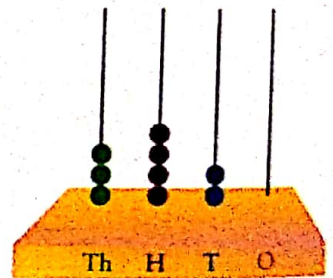
The face value of a digit is its individual value itself.

Example: In the number 3420, the face value of 0 is 0.

The face value of the digit 2 is 2.

The face value of the digit 4 is 4.

The face value of the digit 3 is 3.



Th	H	T	O
3	4	2	0

Place value	Face value
0	0
20	2
400	4
3000	3

Think and Answer

In which place does a digit in a number have the same place value and face value?

a. thousands

b. hundreds

c. tens

d. ones



Exercise 3

1. Write down the place value of the underlined digits.

a) 6000

b) 2295

c) 1300

d) 4056

e) 7698

f) 6302

g) 7118

h) 8992

2. Make numbers with the ones, tens, hundreds and thousands given.

a)

5 ones
6 tens
3 thousands
4 hundreds

b)

1 thousand
4 tens
6 ones
2 hundreds

c)

2 thousands
3 hundreds
1 ten
5 ones

d)

2 ones
8 thousands
3 hundreds

e)

9 tens
3 ones
6 thousands
3 hundreds

f)

2 hundreds
6 thousands
7 ones
6 tens

g)

2 tens
3 ones
5 thousands
8 hundreds

h)

7 tens
2 ones
5 hundreds
2 thousands

Project

EXPERIENTIAL LEARNING

Using the Internet, find the number of test matches played by the following batsmen.
Kapil Dev, Sunil Gavaskar, Sachin Tendulkar

Now answer the questions given below:

- Who played the maximum number of matches?
- Who played the minimum number of matches?

Expanded form and standard (short) form

The expanded form of a number is the sum of the place values of all the digits present in the number.

The standard form of a number is when we combine the face values of all the digits in the numbers.



Example: What is the standard form of the expanded form of 4519?

Standard form

↓
4519

Expanded form

↓
 $4000 + 500 + 10 + 9$

Maths Tip

- ❖ Whenever there is a zero in the ones place, it means there are no ones.
- ❖ Whenever there is a zero in the tens place, it means there are no tens.
- ❖ Whenever there is a zero in the hundreds place, it means there are no hundreds.



Exercise 4

1. Write the expanded form of the numbers.

a) $1956 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

b) $4068 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

c) $3923 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

d) $5670 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

2. Write the standard form.

a) $4000 + 500 + 6 = \underline{\hspace{2cm}}$

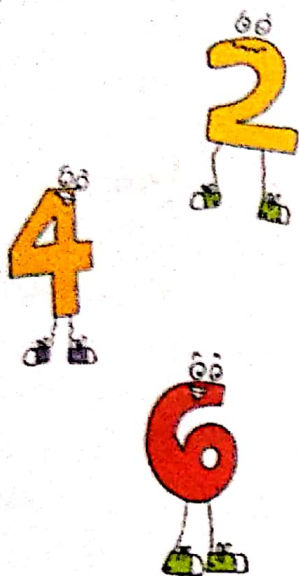
b) $3000 + 200 + 70 + 9 = \underline{\hspace{2cm}}$











c) $9000 + 60 + 3 = \underline{\hspace{2cm}}$

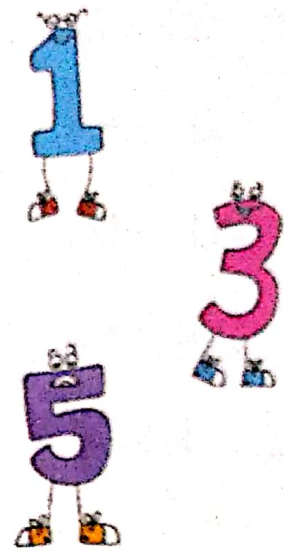
d) $1000 + 800 + 40 = \underline{\hspace{2cm}}$



Even and odd numbers



 EVEN (ALL IN PAIRS)	 ODD (NOT IN PAIRS)
0	1 •
2 	3 
4 	5 
6 	7 
8 	9 



The numbers 2, 4, 6 and 8 make perfect pairs. Hence, they are called **even numbers**.

The numbers 1, 3, 5, 7 and 9 do not make perfect pairs and so are called **odd numbers**.

All numbers that have 0, 2, 4, 6 or 8 in the ones place are even numbers.

All numbers that have 1, 3, 5, 7 or 9 in the ones place are odd numbers.

Predecessor and successor

A number that comes just before (or precedes) a number is known as the **predecessor** of the number.

Subtract 1 from the given number to get its predecessor.

Example: Find the predecessor of 7845.

$$7845 - 1 = 7844$$

A number that comes just after (or succeeds) a number is known as the **successor** of the number.

Add 1 to the given number to get its successor.

Example: Find the successor of 7845.

$$7845 + 1 = 7846$$

Exercise 5

1. Write odd or even.

- a) 5964 b) 7598
- c) 1421 d) 2653
- e) 1754 f) 4415

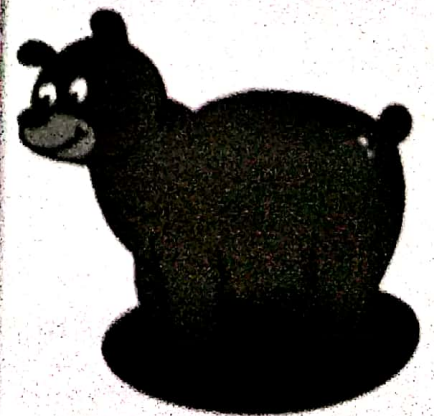


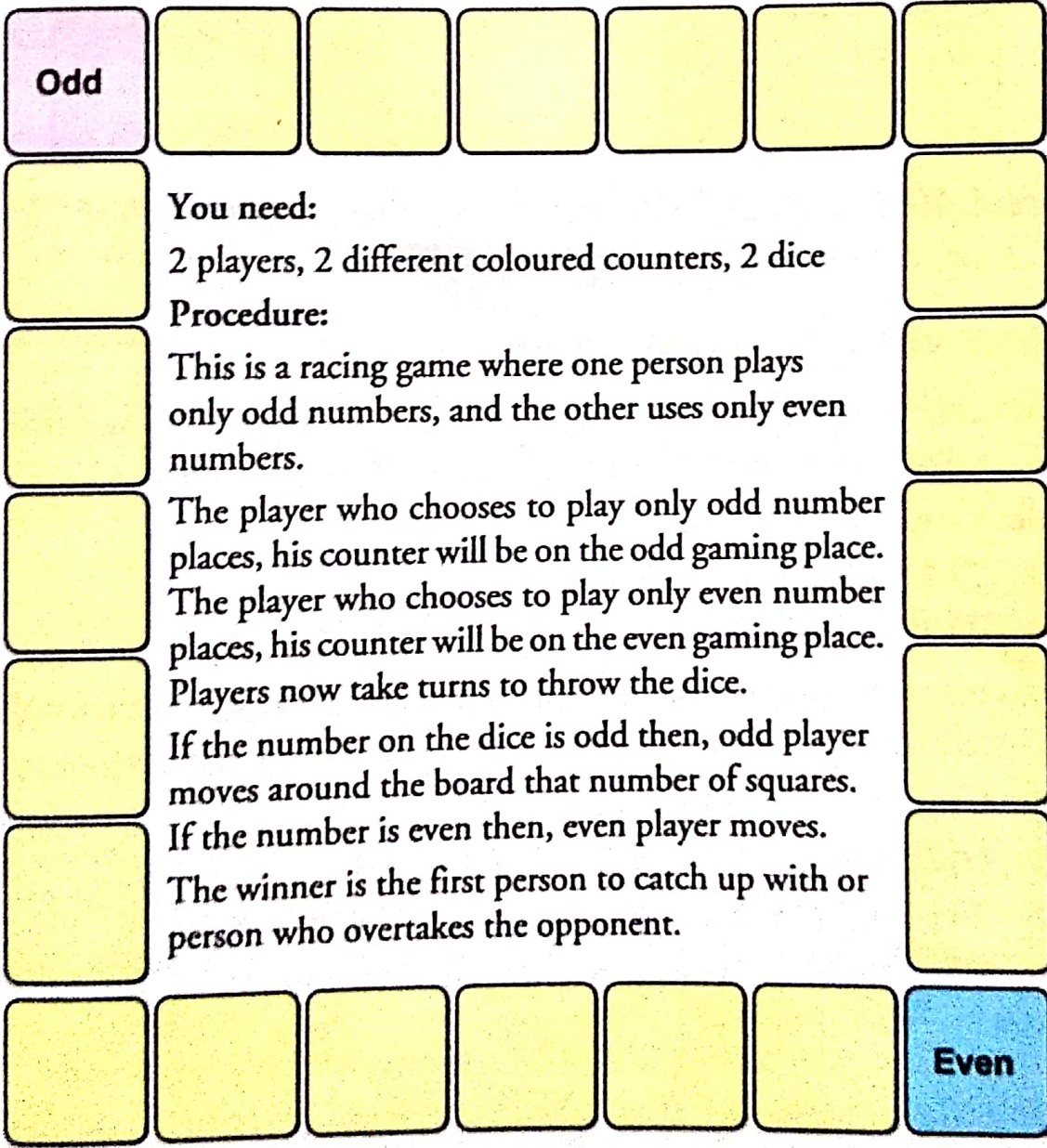
2. Write any 5 even numbers between 7500 and 9999.

3. Write any 5 odd numbers between 2000 and 6000.

4. Write the predecessors and successors of the numbers given.

Predecessor		Successor
a) _____	3671	_____
b) _____	6527	_____
c) _____	2684	_____
d) _____	4931	_____
e) _____	9998	_____
f) _____	5214	_____





You need:

2 players, 2 different coloured counters, 2 dice

Procedure:

This is a racing game where one person plays only odd numbers, and the other uses only even numbers.

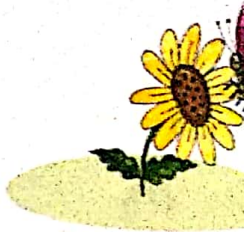
The player who chooses to play only odd number places, his counter will be on the odd gaming place. The player who chooses to play only even number places, his counter will be on the even gaming place. Players now take turns to throw the dice.

If the number on the dice is odd then, odd player moves around the board that number of squares.

If the number is even then, even player moves.

The winner is the first person to catch up with or person who overtakes the opponent.

Comparing numbers



Numbers with different number of digits

If the two numbers being compared have different number of digits, then the number with more digits is the greater one.

Example: Compare 4512 and 359.

Th	H	T	O
4	5	1	2

Th	H	T	O
	3	5	9

In this case, 4512 has four digits and 359 has three digits. So, 4512 is greater than 359, or we can say $4512 > 359$.

Numbers with the same number of digits

If two numbers have the same number of digits, we compare the extreme left digits. The number with the greater extreme left digit is greater.

Example: Compare the numbers.

- ❖ $714 > 398$, because $7 > 3$
- ❖ $2128 < 4972$, because $2 < 4$

If the extreme left digits of two numbers are the same, we compare the next digit towards their right and so on.

Example: Compare the numbers.

- ❖ $6428 > 6319$, because $6 = 6$, but $4 > 3$
- ❖ $2456 > 2438$, because $2 = 2$, and $4 = 4$, but $5 > 3$
- ❖ $8361 < 8364$, because $8 = 8$, and $3 = 3$ and $6 = 6$ but $1 < 4$

Example: Shreya and Ravi are saving money. Shreya has saved ₹ 2789. Ravi has saved ₹ 6540. Who has saved more money?

Let us compare 2789 and 6540.

As, $6 > 2$, $6540 > 2789$

Hence, Ravi has saved more money.



Think and Answer

Which single digit will you replace in the number 3457 to get a number higher than 8456?
a. 3 b. 4 c. 5 d. 9

Ordering numbers

Numbers can be arranged from the smallest to the greatest or from the greatest to the smallest.

Ascending order

When we arrange numbers from the smallest to the greatest, they are said to be arranged in an ascending order.

Descending order

When we arrange numbers from the greatest to the smallest, they are said to be arranged in a descending order.

Example: Arrange the following numbers in ascending and descending orders.

6708, 4562, 7231, 340, 5679

$340 < 4562 < 5679 < 6708 < 7231$

Ascending order: 340, 4562, 5679, 6708, 7231

$7231 > 6708 > 5679 > 4562 > 340$

Descending order: 7231, 6708, 5679, 4562, 340

A 3-digit number will always be smaller than a 4-digit number.





Exercise 6

1. Find the greatest and the smallest number.

a) 382, 4972, 1895, 5785, 750

b) 1473, 8423, 100, 5000, 310

c) 3834, 7528, 1110, 2333, 450

d) 2853, 7691, 9999, 2002, 124

Greatest number

Smallest number

2. Write $<$, $>$, or $=$ for each pair of numbers.

a) 6713 6731

b) 8887 8788

c) 1040 1400

d) 7878 8787

e) 4910 599

f) 5512 5512

3. Circle the greater number in each pair.

a) 2929 399

b) 4525 4555

c) 7770 7707

d) 6999 6877

4. Circle the smaller number in each pair.

a) 5789 5897

b) 7008 7018

c) 3060 3076

d) 4974 4763

Spot Check

Make five problems like question 1 and give them to your friends to solve.



5. Arrange in ascending order.

- a) 8355 7054 2903 4705
- b) 3004 921 9820 5793
- c) 6275 8450 9146 8980
- d) 9186 5506 8920 9578

6. Arrange in descending order.

- a) 6430 5540 5397 942
- b) 8407 415 955 6565
- c) 313 3585 9198 3889
- d) 3602 4765 4796 7796

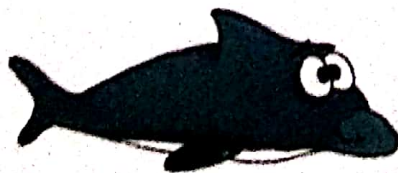
7. Solve the following problems.

- a) Sahil has 1398 cows on his farm. Kabir has 1938 cows. Who has more cows on his farm?
- b) Vani's family has a chicken farm. Her family gathers 1039 eggs on Monday. They gather 989 eggs on Tuesday. Which day did they gather fewer eggs?
- c) A train is carrying 5067 women, 6230 men and 2897 children. Who are the most in number women, men or children?

8. Arrange these in the decreasing order of their prices.



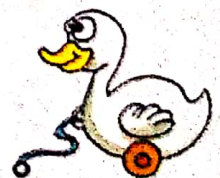
(₹ 1602)



(₹ 1543)



(₹ 1450)



(₹ 1597)

Making numbers with the given digits

Example: Make different 4-digit numbers with the digits 7, 8, 3 and 5. Do not repeat digits. Thus, 7835 is allowed, but 7735 is not.


3857, 3875, 3758, 3578, 3587, 8537

Spot Check


Make the greatest 4-digit number reusing the digits 5, 4, 7, 9.

To get the largest number, write the greatest digit 8 in the thousands place, then the next greatest digit 7 in the hundreds place and so on. Thus, 8753 is the greatest number.

To get the smallest number, write the smallest digit 3 in the thousands place, the next smallest digit 5 in the hundreds place and so on. Thus, 3578 is the smallest number.



The greatest number is formed by writing the digits in descending order.



The smallest number is formed by writing the digits in ascending order.

Maths Tip

While forming number using digits with 0 as one of the digits, never start the number with 0.



Exercise 7

1. Use the given digits without repetition and make the greatest and the smallest 4-digit numbers.

Greatest 4-digit number

Smallest 4-digit number

a) 5, 8, 7, 4

b) 9, 7, 8, 1

c) 4, 6, 2, 0

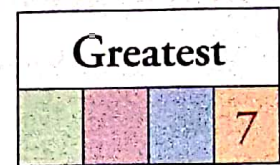
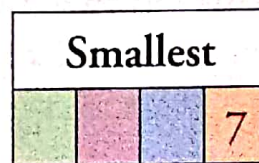
d) 1, 7, 6, 3

2. Form the greatest and the smallest 4-digit numbers by using any digit twice.

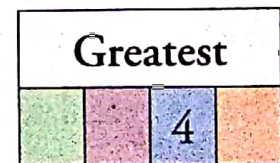
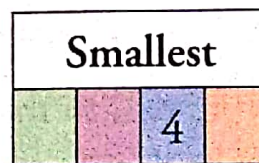
	Greatest 4-digit number	Smallest 4-digit number
a) 4, 6, 7	<input type="text"/>	<input type="text"/>
b) 9, 0, 1	<input type="text"/>	<input type="text"/>
c) 0, 2, 7	<input type="text"/>	<input type="text"/>
d) 8, 5, 3	<input type="text"/>	<input type="text"/>

3. Write the greatest and the smallest 4-digit numbers using any four different digits.

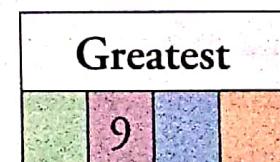
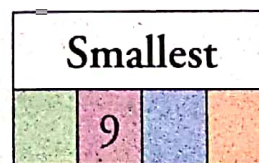
- a) 7 in the ones place



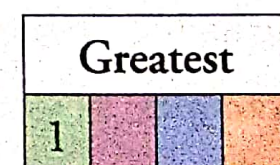
- b) 4 in the tens place



- c) 9 in the hundreds place



- d) 1 in the thousands place



Rounding off numbers

When you round off, you find the closest multiple of ten (or one hundred, or any other place value) to your number.

Numbers can be rounded off to the tens place, hundreds place, thousands place, and so on.

Rounding off to the nearest 10

When a number is rounded to the tens place, the final value has a zero for the ones place.

In a 2-, 3- or 4-digit number, if the digit in the ones place is 0, 1, 2, 3, or 4, then the number is rounded off by keeping the number to the same ten. If the digit in the ones place is 5, 6, 7, 8 or 9, then we round off the number to the higher ten.

Examples:

- ❖ 63 will be rounded off to 60 (as the digit in the ones place is less than 5, so we round off to the same ten).
- ❖ 236 will be rounded off to 240 (as the digit in the ones place is greater than 5, so we round off to a higher ten).
- ❖ 5891 will be rounded off to 5890 (as the digit in the ones place is less than 5, so we round off to the same ten).

Rounding off to the nearest 100

When a number is rounded to the hundreds place, the final value has a zero in the tens place and the ones place each.

In a 3- or 4-digit number if the digit in the tens place is 0, 1, 2, 3, or 4, the number is rounded off by keeping the number to the same hundred.

If the digit in the tens place is 5, 6, 7, 8 or 9, we round off the number to the higher hundred.

Examples:

- ❖ 421 will be rounded off to 400 (As the digit in the tens place is less than 5, so we round off to the same hundred).
- ❖ 576 will be rounded off to 600 (As the digit in the tens place is greater than 5, so we round off to a higher hundred).

Rounding off to the nearest 1000

When a number is rounded to the thousands place, the final value has a zero in the hundreds, tens and the ones places.

In a number if the digit in the hundreds place is 0, 1, 2, 3, or 4, then the number is rounded off by keeping the number to the same thousand. If the digit in the hundreds place is 5, 6, 7, 8 or 9, then we round off the number to the higher thousand.

Examples:

- ❖ 3213 will be rounded off to 3000 (As the digit in the hundreds place is less than 5, so we round off to the same thousand).
- ❖ 8773 will be rounded off to 9000 (As the digit in the hundreds place is greater than 5, so we round off to a higher thousand):



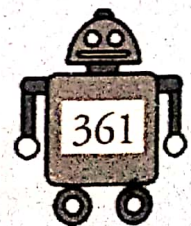
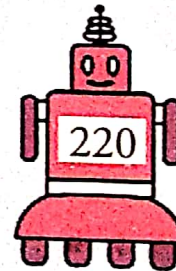
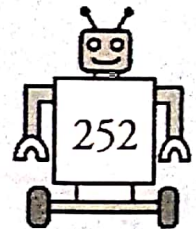
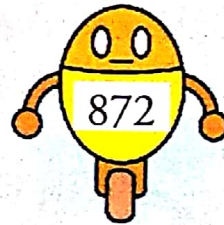
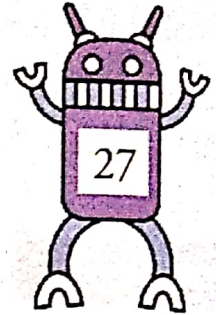
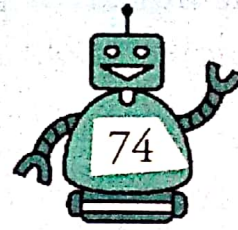
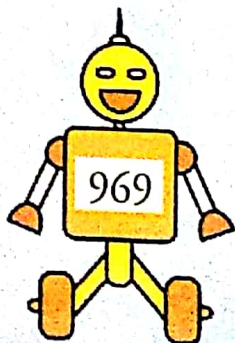
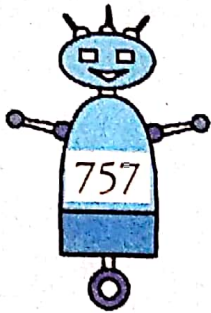
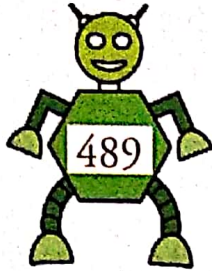
Exercise 8

1. Round off the numbers written on the rockets to the nearest tens. Draw a line from each rocket to the correct planet.

The image shows a matching exercise. On the left, there are six rockets labeled a through f, each with a number written on its side. On the right, there are six planets, each with a number written on it. A vertical dashed line separates the rockets from the planets. The goal is to draw a line from each rocket to the planet whose number is the nearest ten to the number on the rocket.

Rocket Label	Number on Rocket	Planet Number
a.	23	300
b.	55	8320
c.	304	8350
d.	86	20
e.	8354	90
f.	8321	60

2. Round off the numbers on the robots to the nearest hundred. Draw a line from each robot to the correct battery.



a. 0

b. 100

c. 200

d. 300

e. 400

f. 500

g. 600

h. 700

i. 800

j. 900

k. 1000

3. Round off each number to the nearest thousand.

a) 2465 _____

b) 9345 _____

c) 4902 _____

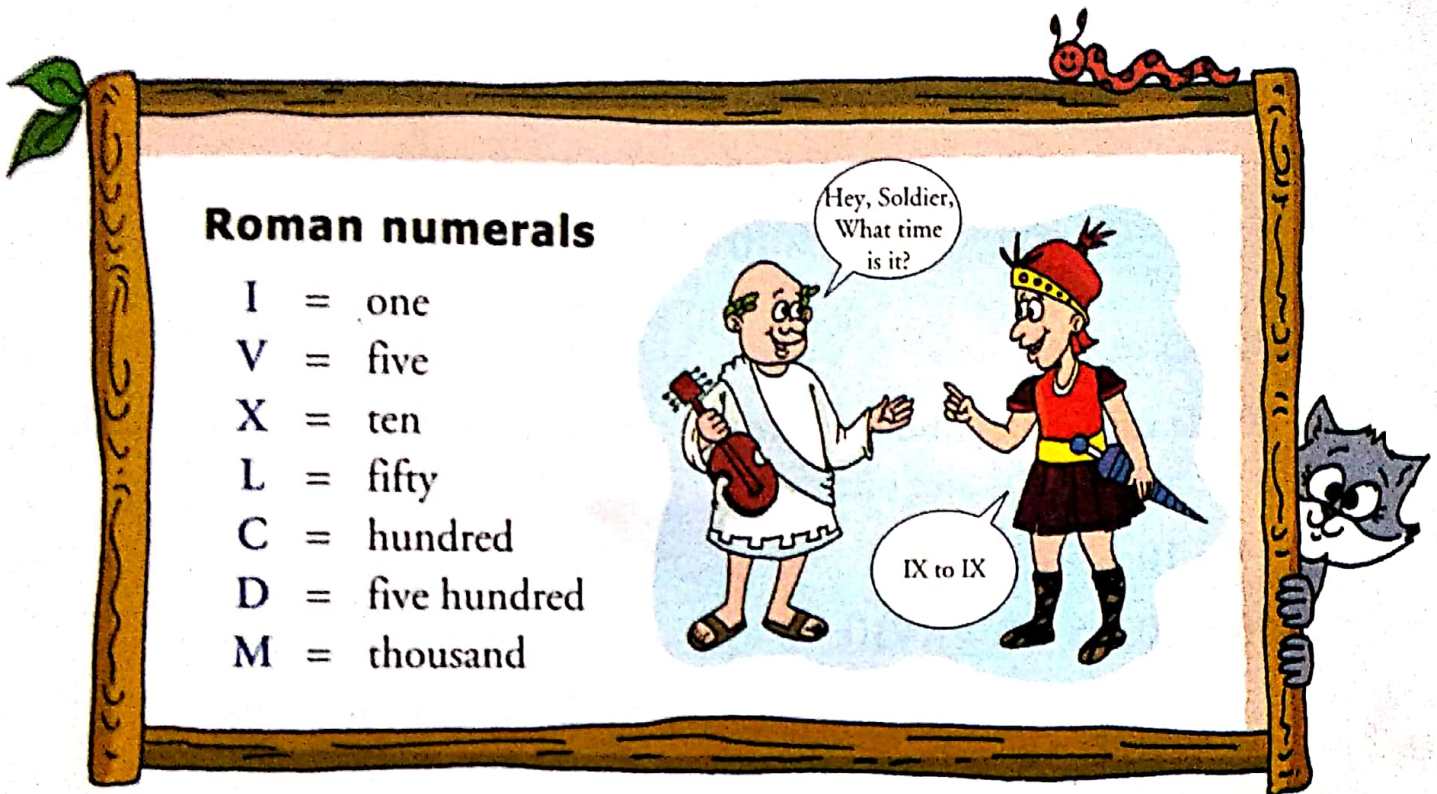
d) 6123 _____

e) 8837 _____

f) 3391 _____

Roman numerals

Roman numerals are written using the letters of the English alphabet.



There are four basic principles for reading and writing Roman numerals:

1. A letter repeats its value that many times ($XXX = 10 + 10 + 10 = 30$, $CC = 100 + 100 = 200$, etc.). A letter can be repeated maximum three times.

Remember

V, L and D cannot be repeated.

2. If a letter of smaller value is written after a letter of greater value, then we add the value of the two letters.

$$XII = 10 + 1 + 1 = 12$$

$$LII = 50 + 1 + 1 = 52$$

$$LXX = 50 + 10 + 10 = 70$$

$$MCC = 1000 + 100 + 100 = 1200$$

3. If a letter of smaller value is written before a letter of greater value, then we subtract the value of the smaller letter from the value of the larger letter.

$$IX = 10 - 1 = 9$$

$$IV = 5 - 1 = 4$$

$$XC = 100 - 10 = 90$$

$$CM = 1000 - 100 = 900$$

4. While expressing numbers greater than 10, the numbers must first be broken into tens and ones.

$$14 = 10 + 5 - 1 = XIV$$

$$18 = 10 + 5 + 3 = XVIII$$



Exercise 9

1. Write the Roman numerals for the following.

a) 17 _____

b) 54 _____

c) 19 _____

d) 27 _____

e) 35 _____

f) 59 _____

2. Write the number form of the Roman numerals.

a) XV _____

b) CVI _____

c) XXIV _____

d) LIX _____

e) XXXVIII _____

f) LX _____

Life Skills

EXPERIENTIAL LEARNING

Use the digits 0, 1, 8 and 9 to get India's first 24-hour, tollfree, phone outreach service for service CHILDLINE India. Visit now childlineindia.org.in to find out more about this organisation and check its number.


Fill in the blanks.

1. What is 1 more than 999? _____
2. What is 1 less than 8999? _____
3. Which smallest 4-digit number can be formed using the digits 1, 2, 2 and 2? _____
4. What will be the predecessor of an even number? Odd or even

5. Will the face value of 5 in 354 be different than in 345 or the same?

6. Which of the numbers, 2099, 2499 and 2999 will not be rounded to 2000 when rounded to the thousands place? _____
7. Which is a meaningless Roman numeral? XII or IIX. _____
8. Which number is greater – 999 or 1009? _____
9. Can we get an odd number just after an odd number? Yes or No

10. What is the short form of $8000 + 80$? _____

 **Maths Lab Activity**

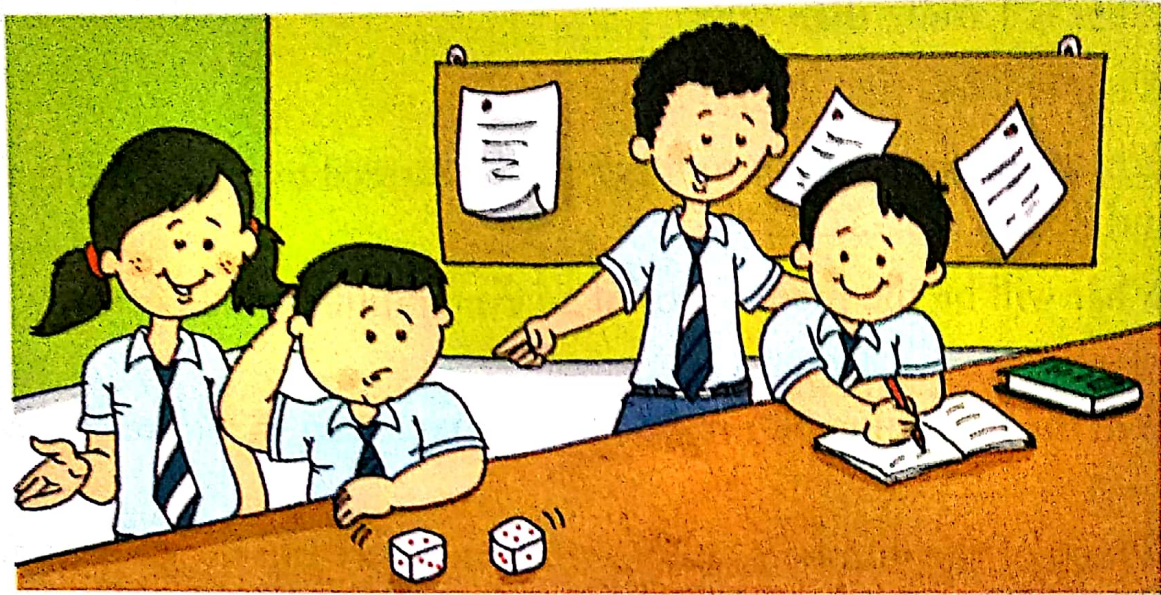
Objective: Create a number and learn about its place and face values.

Material needed: Dice for the class.

Preparation: The teacher will divide the class in pairs and give each pair a dice.

- Procedure:**
1. Each student in a pair will roll the dice alternately to create a 4-digit number.
 2. The first number will be written in the ones place, second in the tens and so on, in their notebooks.

- After creating the number, the students will write the place and face value for each digit.
- Each pair can conduct this exercise as many times as required,



Worksheet

EXPERIENTIAL LEARNING

Tick (✓) the correct option.

- The numeral for four thousand five is
 a) 405 b) 45 c) 4050 d) 4005
- The place value of the digit 9 in 8490 is
 a) 9 b) 90 c) 100 d) 10
- The numeral for $4000 + 60 + 3$ is
 a) 463 b) 4063 c) 4603 d) 4360
- Savita has made a 4-digit number using the digits 6, 5, 4, and 8. Her number has the smallest digit at the hundreds place. Which of the following is her number?
 a) 6548 b) 5648 c) 8465 d) 4586
- In which of the following numerals, the place value of the underlined digit is not equal to its face value?
 a) 6407 b) 2198 c) 8471 d) 6215

6. Which is the smallest number in the following?
a) 5264 b) 5624 c) 6542 d) 5462
7. Which of the following sets of numbers is in the correct ascending order?
a) 6576, 6657, 6675, 6567 b) 6567, 6576, 6657, 6675
c) 6576, 6567, 6675, 6657 d) 6567, 6657, 6756, 6576.
8. The greatest 4-digit number using different digits among the following is
a) 9988 b) 9876 c) 9786 d) 9687
9. Which of the following is a valid Roman numeral?
a) IXIV b) XIXX c) XVX d) XIX
10. The correct Roman numeral for 39 is
a) IXXL b) XXXIX c) IXL d) XXVIII
11. 4286 rounded off to the nearest hundreds gives
a) 4200 b) 4280 c) 4300 d) 5000
12. Round off 6245 to the nearest tens.
a) 6250 b) 6240 c) 6260 d) 6270