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# **Unit # 1: Whole Numbers**

### **Topic: Ordinal Numbers**

#### Learning Outcomes:

After completing these activities, students will be able to:

- Write ordinal numbers from first to twentieth.
- Write numbers 1-100 in words.
- Read numbers up to 999
- Write numbers up to 999 as numerals.
- Recognize the place value of a 3-digit number.
- Identify the place value of a specific digit in a 3-digit number.
- Compare 2-digit numbers with 3-digit numbers.
- Compare 3-digit numbers with 3-digit numbers.
- Count backward ten steps down from any given number.
- Arrange numbers up to 999, written in mixed form, in an ascending or descending order.
- Count and write 10 s (e.g. 10, 20, 30.....)
- Count and write in 100s (e.g.100, 200, 300...)
- Identify the smallest/greatest number in a given set of numbers.
- Recognize that 1000 is one more than 999 and the first 4-digit number.

#### Let's Learn:

**Ordinal numbers** are the numbers that indicate the exact position of something or someone at a place. If the numbers of objects/persons are specified in a list: the position of the objects/persons is defined by ordinal numbers.

For example:

- Rameen came first in class
- Sara was the third girl standing in a row
- Munir stays on the fourth floor of the apartment
- The table is kept at the sixteenth position in the display of the shop

Look at the below example of how the birds are arranged in the ordinal form:



Ordinal Number Words						
1 st	2 <sup>nd</sup>	3rd	4 <sup>th</sup>	5 <sup>th</sup>		
first	second	third	fourth	fifth		
6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	<b>q</b> th	10 <sup>th</sup>		
sixth	seventh	eighth	ninth	tenth		
11 <sup>th</sup>	12 <sup>th</sup>	13 <sup>th</sup>	14 <sup>th</sup>	15 <sup>th</sup>		
eleventh	twelfth	thirteenth	fourteenth	fifteenth		
16 <sup>th</sup> sixteenth	17 <sup>th</sup>	18 <sup>th</sup> eighteenth	19 <sup>th</sup> nineteenth	20 <sup>th</sup>		

### **Instructions for teachers:**

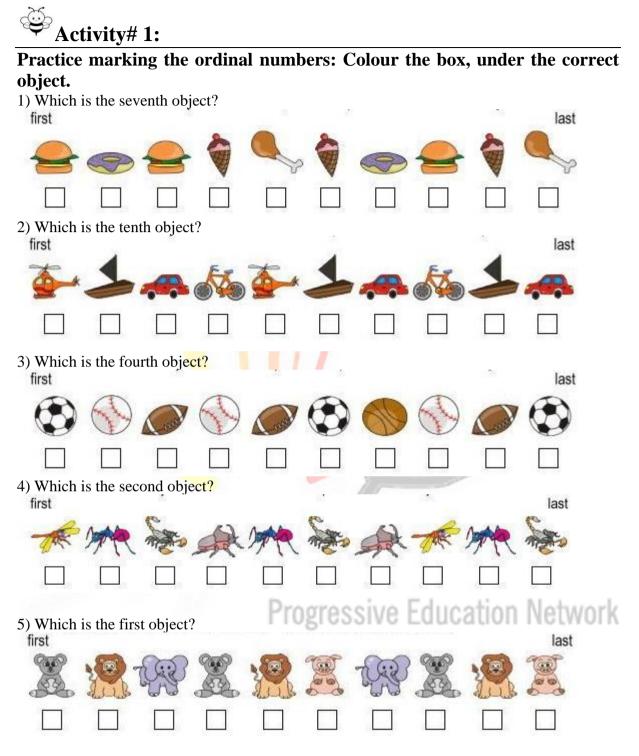
Begin the lesson by explaining the concept of ordinal numbers. Emphasize that ordinal numbers represent the position or order of objects or events.

Provide examples of ordinal numbers (e.g., first, second, third, etc.) and explain their use in everyday life (e.g., ranking in a race, ordering items on a menu).

Practice pronunciation with the whole class, repeating the numbers together several times. Encourage students to identify ordinal numbers in their daily lives. For example, they can discuss the order of family members or describe the position of their classroom in the school building.

### **Important vocabulary**

- Ordinal numbers
- ➢ Compare
- Ascending order
- Descending order



Do it yourself Draw 10 apples, colour the second, fifth and eighth apple.

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#### Follow the instructions.

- Colour the fourth, eighteenth and twelfth box Red.
- Colour the nineteenth, thirteenth and fourteenth box Blue.
- Draw a happy face in the first, sixth, eleventh and sixteenth box.
- Draw a red cross (X) in the seventeenth and fifteenth box.
- Colour the second, third and fifth box Green.
- Draw a red + in the seventh and ninth box.
- Draw righthard tenth box.





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#### Solve the exercise.

> Put a line under the twelfth, second and third star.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Circle the eleventh and seventh star.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

> Draw a  $\diamond$  around the ninth and fifteenth star.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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> Draw a line | down the eighth and eighteenth star.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

> Draw a (X) over the fourth, thirteenth and twentieth star.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### Write the ordinal numbers from one to twenty. First one has been done for

you.

1 <sup>st</sup>	First
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# **Topic: Counting up to 100 in Words**

### Let's Learn:

Counting in words refers to the representation of numbers using the English alphabet.

1 = One	11 = Eleven	21 = Twenty-one
2 = Two	12 = Twelve	22 = Twenty-two
3 = Three	13 = Thirteen	23 = Twenty-three
4 = Four	14 = Fourteen	24 = Twenty-four
5 = Five	15 = Fifteen	25 = Twenty-five
6 = Six	16 = Sixteen	26 = Twenty-six
7 = Seven	17 = Seventeen	27 = Twenty-seven
8 = Eight	18 = Eighteen	28 = Twenty-eight
9 = Nine	19 = Nineteen	29 = Twenty-nine
10 = Ten	20 = Twenty	30 = Thirty
	)	$\square$
31 = Thirty-one	41 = Forty-one	55 = Fifty-five
32 = Thirty-two	42 = Forty-two	60 = Sixty
33 = Thirty-three	43 = Forty-three	65 = Sixty-five
34 = Thirty-four	44 = Forty-four	70 = Seventy
35 = Thirty-five	45 = Forty-five	75 = Seventy-five
36 = Thirty-six	46 = Forty-six	80 = Eighty
37 = Thirty-seven	47 = Forty-seven	85 = Eighty-five
38 = Thirty-eight	48 = Forty-eight	90 = Ninety
39 = Thirty-nine	49 = Forty-nine	95 = Ninety-five
40 = Forty	50 = Fifty	100 = One Hundred
	·	



### Write the Number names of the following numbers.

Numbers	Words		Numbers	Words
74			20	
89			17	
99			47	
94			19	
57		Anno 1997 and 19	45	
38			5	
44			6	
07			59	
27			66	

Activity# 2 A:

### • Match the columns of following numbers.

100

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Eighty-four

Seventy-seven

84

Ninety-Nine

77

Fifty-five

Hundred

55

99

# Activity# 2 B:

### • Read number names and circle the correct option in each row.

Seventy	7	17	70	Thirty	13	30	33
Eight	18	8	80	Eleven	13	11	12
Nine	19	90	9	Sixty-nine	60	9	69
Fifteen	50	5	15	Zero	007	005	0
Hundred	100	10	1000	Ninety-nine	90	9	99
Eighteen	8	80	18	Eighty-two	2	18	82

1) 10 is the smallest 2-digit number, and smallest 1-digit number is 1.

2) 100 is the smallest 3-digit number.

3) A 3-digit number can also have two zeros but the two zeros should be in the tens place and the ones place, for example, 100, 200, 300, 400. work



# **Topic: 3-digit Numbers**

### Let's Learn:

Three-digit numbers are the numbers 100 to 999, which have digits in the hundreds, tens and ones places. Examples include: 113. 247.

# Activity# 3:

### Can you solve this puzzle?

• A Teacher wrote a puzzle on the board. "Add the smallest 2-digit number to the smallest 1-digit number. Subtract the sum from one less than the greatest 3-digit number". Ali said that the answer is 987; Ahmad said that it is 997. Who is right?

Solve:

### Use digits to make the largest 3- digit number:

- 3, 1, 5 \_\_\_\_\_
- 5,7,7 \_\_\_\_\_
- 8, 9, 9
- 6, 7, 5 \_\_\_\_\_
- 4, 8, 9
- 7, 2, 3 \_\_\_\_\_

What is the largest 3-digit number you made: \_

# Write the following words in numerals

- Three hundred and four .....
- Four hundred and twelve .....
- One hundred and seventeen.....
- Two hundred and twenty-nine.....



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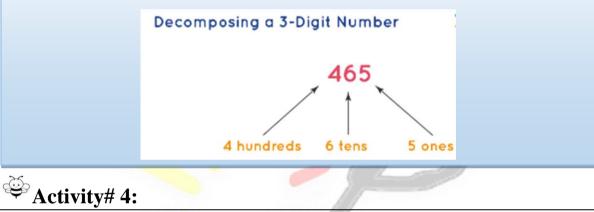


## **Topic: Place Value of 3-digit Numbers**

### Let's Learn

**3-digit numbers** begin with 100 and end on 999. For example, 673, 104, 985 are 3-digit numbers. It is to be noted that the first digit of a three-digit number cannot be zero because in that case, it becomes a 2-digit number. For example, 045 become 45.

**Decomposing a 3-digit number:** In a three-digit number, there are three place values used – hundreds, tens, and units. Let us take one example to understand it better. Here, 465 is a three-digit number and it is decomposed in the form of a sum of three numbers. As 5 is on the units place, 60 is on the tens place and 400 is on the hundreds place.



### Encircle the "Place Value".

a) Encircle the digits at the hundred's place. 570, 320, 875, 523, 633, 395

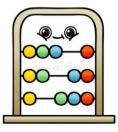


- b) Encircle the digits at the ten's place. 2 3 5, 4 5 2, 1 9 2, 3 3 3, 7 0 5, 9 5 0
- c) Encircle the digits at one's place. 3 1 6, 4 0 3, 5 1 5, 4 3 6, 5 9 9, 4 9 7

### Write the place values of the digits.

- Value of 6 in below numbers:
  - a) 632 \_\_\_\_\_ b) 926 \_\_\_\_\_
- Value of 3 in below numbers:
  - a) 403 \_\_\_\_\_ b) 013 \_\_\_\_\_

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Write the nu	mbers with the help	o of values. Place Value Hundreds Tens Ones 9 2 8
Standard	Place values	Expanded
245	ones tens hundreds	+=
138	ones tens hundreds	+=
592	ones tens hundreds	+=
376	ones tens hundreds	+=
674	ones tens hundreds	rogressive Education Network
555	ones tens hundreds	+=
723	ones tens hundreds	+=



Date:	Day:
	Unit # 1: Whole Numbers
<u>]</u>	<b>Copic: Comparison of 3-digit numbers</b>
	abacus we can count the beads from right to left he exact number 643.
O (unit or ones)	In ones or unit place we see 3 beads.
T (tens) In	tens place we see 4 beads.
H (hundreds)	In hundreds place we see 6 beads $H T O$
Activity	# 5:
• Write the t	hree <mark>nu</mark> mbers and answer the questions.
1) H U • The greatest • The smallest	2) 3)   TO H   H TO   H TO   H TO
	<ul> <li>FUN ACTIVITY Do it in vour notebooks </li> <li>1. Make the smallest 3-digit number, that has no zeros, without repeating any digit.</li> </ul>
	2. Make the largest 3-digit number using any three digits out of 8, 6, 1 and 4, without repeating any one of them.
	3. Make the smallest 3-digit number using 4, 3, and 7 without repeating any of them.
	Teachers discuss this in your classrooms.
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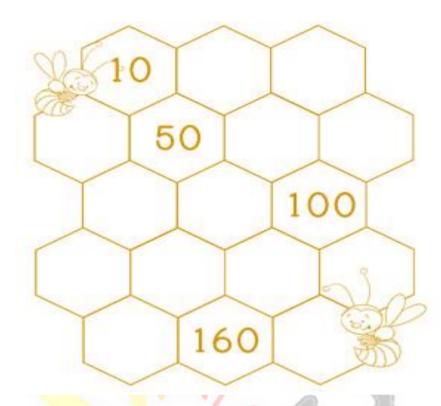
# **<u>Topic: Ordering numbers</u>** Write the following numbers in ascending order.

1. 790, 770, 765, 714 Ascending **2.** 879, 846, 825, 833 order means, from smallest **3.** 116, 125, 130, 145\_\_\_\_\_ to greatest digit. Write the following numbers in descending order. Descending 1. 855, 712, 960, 977\_\_\_\_\_ order means from greatest 2. 523, 325, 12, 488 \_\_\_\_\_ to the smallest digit. 3. 652, 627, 710, 7<mark>45\_\_\_\_\_</mark>\_\_\_\_ 4. 22, 336, 215, 540 **Topic: Backward Counting** Write the backward counting 10 steps down from the given numbers. 1. 66 -2 135 etwork 3. 250 -4. 350 -

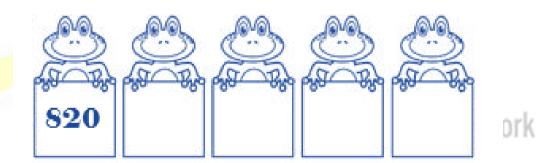
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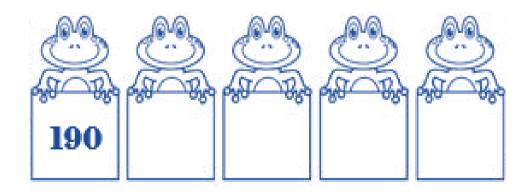
### **Topic: Counting in 10s and 100s** Complete the following by counting in 10s and 100s.



• Complete the following by counting in 10s.



• Write the next 4 numbers by counting in 100s.



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### **Topic: One-Thousand**

• Complete the chart below. Start the counting from 900 and complete the spaces.

901							909	
	912			915				
921			924					
	932						939	940
	942	943				947		
			954			957		
961				965				970
			974				979	
981	982				986			
	992						999	1000



Write the place value of 1000.

Thousand	Hundreds	Tens	Ones

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# Unit # 2: Number Operations

# **Topic:** Addition

#### **Learning Outcomes:**

After completing these activities, students will be able to:

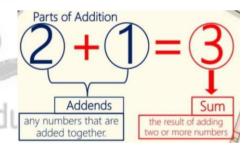
- Add 1-digit number and 1-digit number
- Add 1-digit number and 2-digit number with carrying
- Add 2-digit number and 2-digit number with carrying
- Solve the real life number stories involving addition of 2-digit number with carrying.
- Add 3-digit number and 1-digit number without carrying
- Add 3-digit number and 2-digit number without carrying
- Add 3-digit number and 3-digit number without carrying
- Solve real life number stories involving addition of 3-digit number without carrying
- Add 3-digit number and 1-digit number with carrying of tens and hundreds
- Add 3-digit number and 2-digit number with carrying of tens and hundreds
- Add 3-digit number and 3-digit number with carrying of tens and hundreds
- Solve real life number stories involving addition of 3-digit number with carrying of tens and hundreds
- Add numbers up to 50 using mental calculation strategies

# **Topic: Addition of 1-digits Numbers**

### Let's Learn:

**Additon** is a way of combining things and counting them together as one large group. In addition, we use the symbol +. We read it as a plus. When two numbers are added, we get their sum. the parts of the addition statement are addends, plus operation, equality operation, and the sum.

An example of addition is if Sam has 1 cookie and Cindy gives him another cookie. He will have a total of 2 cookies.



To add to a number we start from zero and count to the first number. Then we continue counting further until we reach the amount of the next number.

When the sum of the ones is more than 9 after adding, then 10 ones make 1 ten. Carry 1 ten to the tens place

Т	0
(1)	6
+	7
1	3

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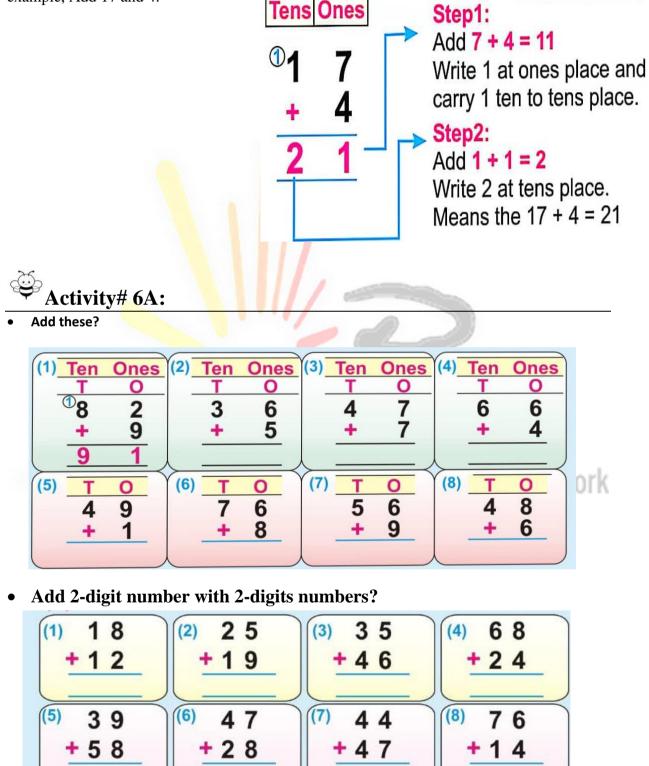
Activity# 6: Let us find. Add the numbers and write in the place value chart. <sup>2)</sup> **4+6** <sup>3)</sup> 3+9 <sup>1)</sup> 8+5 1) 2) Ones Tens Tens 3) Tens Ones Solve the following. work 91 &× 8+8= 5+9= 6+4=

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## **Topic: Addition of 2-digit Numbers with Carrying**

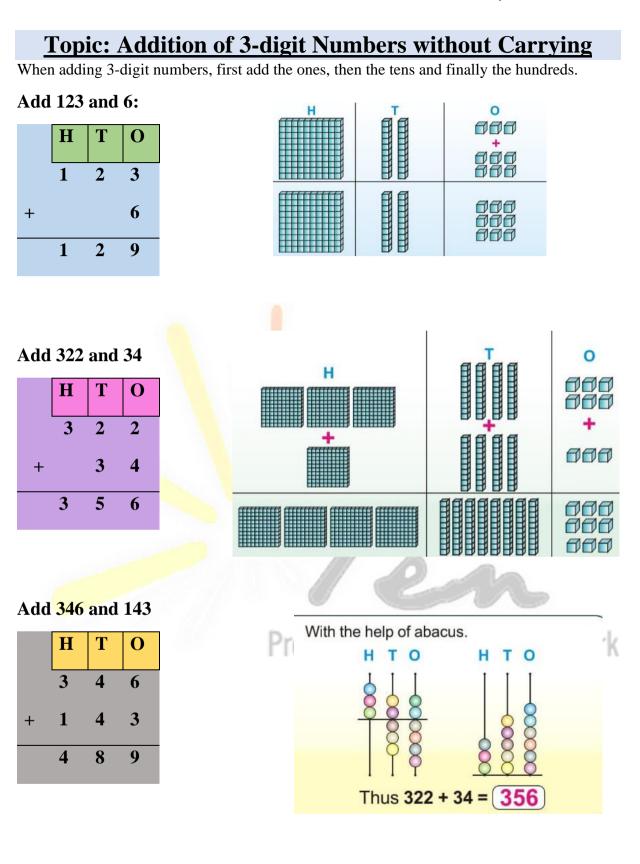
As we have learned 2-digit numbers are those numbers that have two place values ones and tens. The number on the right is in one's place whereas the number on the left is in the tens place. For example, in 16 we have 1 ten and 6 ones.

To add a 2-digit number to a 1-digit number we first place them in the place value chart. For example, Add 17 and 4.



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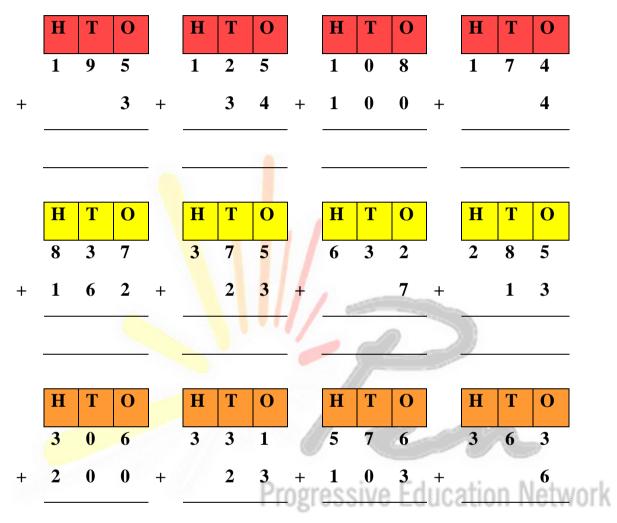


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# Activity# 6B:

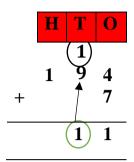
### • Carefully absorve these and then add them?

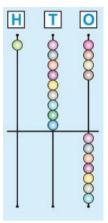


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### **Topic: Addition of 3-digit Numbers with Carrying** Addition of 1-digit to 3-digit number.







Step1:

194 = 1 hundred, 9 tens and 4 ones.

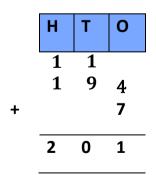
Add ones 4 + 7 = 11 ones.

Write 1 at ones place and carry 1 to tens place.



Add tens 9 + 1 = 10

Write 0 at tens place and carry 1 to hundreds place.



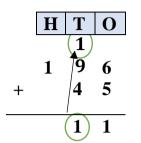
Η	Τ	0
I		Ī
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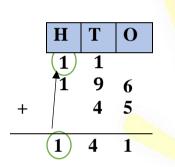
Step 3:

Add hundreds 1 + 1 = 2 hundreds. Write 2 at hundred places. Addition of 2-digit number to 3-digit number.



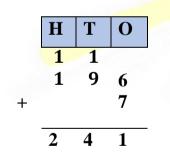
Step1:

194 = 1 hundred, 9 tens and 6 ones. 45 = 4 tens and 5 ones Add ones 6 + 5 = 11 ones. Write 1 at ones place and carry 1 to tens place.



Step 2:

Add tens 9 + 1 + 4 = 1414 = 1 hundred and 4tens Write 4 at tens place and carry 1 to hundreds place.

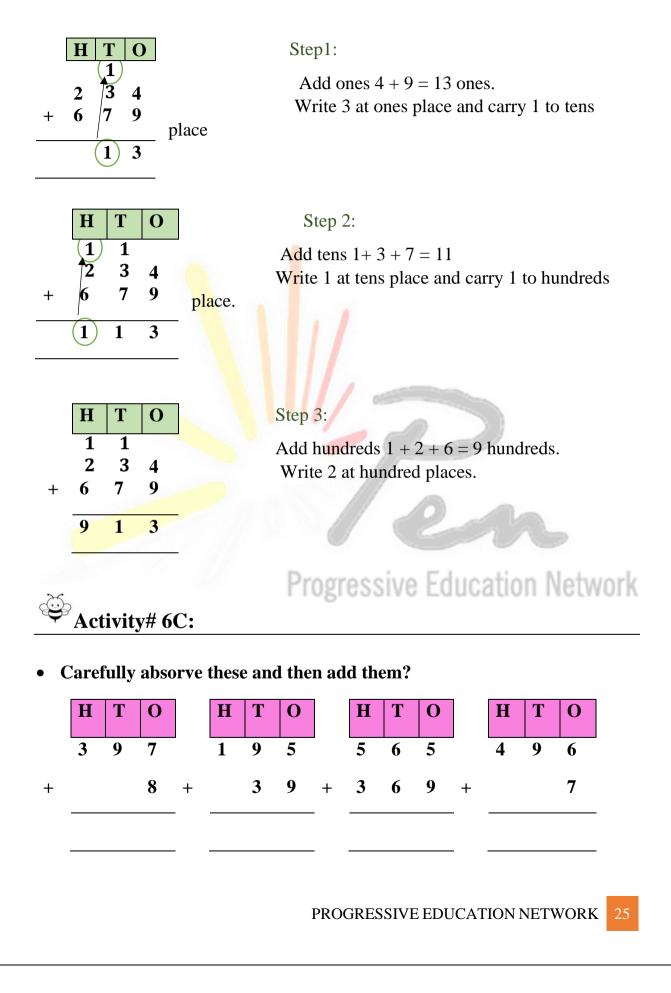


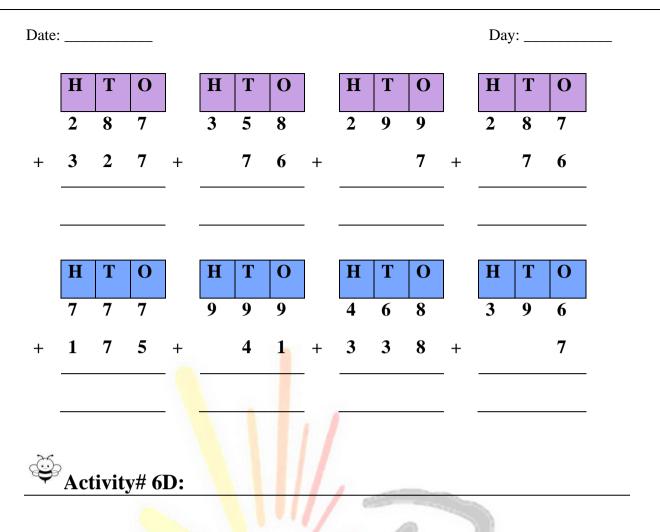
Step 3:

Add hundreds 1 + 1 = 2 hundreds. Write 2 at hundred place.

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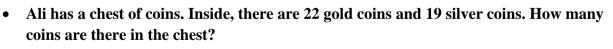
### Addition of 3-digit number to 3-digit number.





Solve the word problems, and write the answer by making a place value chart.

• Anaya is helping set up for a school picnic. She has 10 small paper plates and 17 large paper plates. In all, how many paper plates does she have?



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Hassan jumped on the couch 12 times, and his friend Usman jumped on it 11 times.
Then, the couch broke and they both got in big trouble. How many times did they
jump on the couch total?



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• After a forest fire, there are 636 old trees, plus 2 baby trees called saplings. How many trees are there in total?



• Company is hosting a conference. So far, 714 people from Pakistan have signed up, as well as 58 people from other countries. What is the total number of people who have signed up?

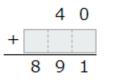


• Minahil loves to read in her pass time. Last year, she read 210 plays and 60 novels. How many books she read in all?



• Fill in the missing numbers.





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### • Add using mental strategy and complete the following.

- 1. 32 + 15 =
- 2. 45 + 12 =
- **3. 65** + **18** =
- 4. 50 + 40 =

### **Important Vocabulary**

- > Addition
- Without carrying addition
- With carrying addition



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# Unit # 2: Number Operations

## **Topic:** Subtraction

#### **Learning Outcomes:**

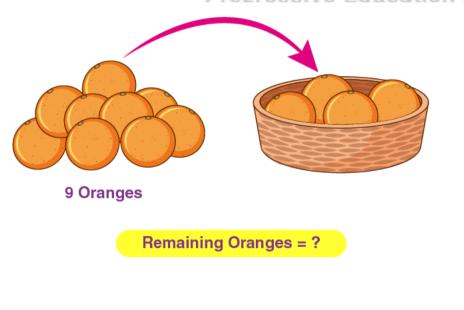
After completing these activities, students will be able to:

- Subtraction 1-digit number from 2-digit number with borrowing.
- Subtraction 2-digit number from 2-digit number with borrowing.
- Solve real life numbers stories of subtraction of 2-digit numbers with borrowing.
- Subtraction 1-digit number from 3-digit number without borrowing.
- Subtraction 2-digit number from 3-digit number without borrowing.
- Subtraction 3-digit number from 3-digit number without borrowing.
- Solve real life number stories of subtraction up to 3-digits without borrowing.
- Subtraction 1-digit number from 3-digit number with borrowing.
- Subtraction 2-digit number from 3-digit number with borrowing.
- Subtraction 3-digit number from 3-digit number with borrowing.
- Solve real life number stories of subtraction up to 3-digit numbers with borrowing.
- Analyze simple situations identifying correct operation of addition and subtraction with carrying/borrowing in mixed form.
- Subtract numbers up to 50 using mental calculation strategies.

# <u>Topic: Subtraction of 1-digit Number from 2-digit</u> <u>Number with Borrowing</u>

### Let's learn:

**Subtraction** represents the operation of removing objects from a collection. The minus sign signifies subtraction –. For example, there are nine oranges arranged as a stack (as shown in the figure), out of which four oranges are transferred to a basket, then there will be 9 - 4 oranges left in the stack, i.e., five oranges. Therefore, the difference between 9 and 4 is 5, i.e., 9 - 4 = 5.



The symbol "-" signifies subtraction. A subtraction process consists of three parts of numbers, namely minuend, subtrahend and difference. The number in a subtraction sentence from which we subtract another number is called a minuend, which means the minuend is the first number in a subtraction process.

Subtrahend

Example: 8 – 6 = 2

Here, 8 = Minuend 6 = Subtrahend 2 = Difference

2 = DifferenceAnd, "-" is the minus, i.e. the symbol for subtraction and "=" is the equal sign.However, the parts of the subtraction can be seen in the figure

Minuend

### Subtraction of 2-digit Numbers with Borrowing.

Since 3 is less than 7. 7ones cannot be taken away from 3 ones. Borrow 1 ten and convert it in 10 ones and add 3 in it. 10 + 3 = 13

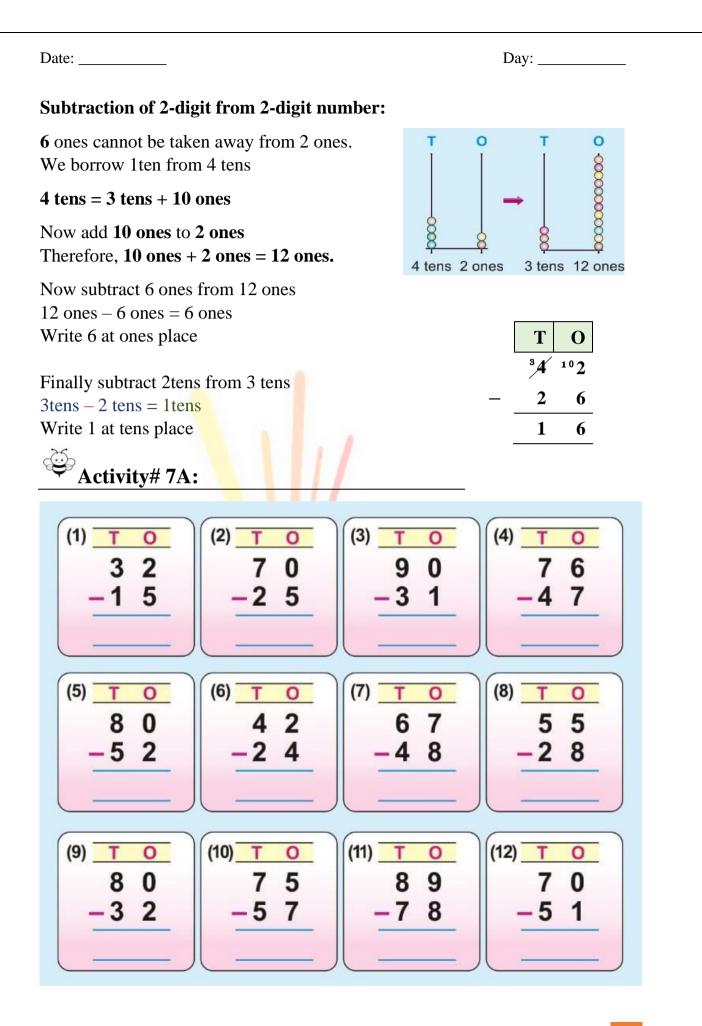
Now subtract 7 ones from 13 ones. 13 - 7 = 6. After borrowing the digit left on the tens place is 1. Hence, 23 - 7 = 16.

Т	0
12	103
-0	7
1	6

Difference

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Activity# 7: Subtract the single digit number from the two-digit number. rk 21 - 7 = 12 - 6 = 4 1 29 - 6 = 15 - 3 = 5 2 19 - 2 = 18 - 8 = 6 3 11 - 8 = 7



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# **Topic: Subtraction of 3-digit Numbers without Borrowing**

### Let's learn:

As we know that the number between 100 and 99 are 3-digit numbers. In a 3digit number there are three 3 place values used hundreds, tens, and ones. For example, 465=4 hundreds + 6 tens + 5 ones.

As for subtract from 3-digit numbers there are two possibilities of subtraction either with borrowing a number or without. First let's look at without borrowing

U	it from 3-digit	without carry	2 6
ubtract 7 from	m 269		2 0
			<u>-</u>
2	6	9	2 6
olve 589 – 3	8		H T
olve 589 – 3	8	+ + + + + + + +   9	$     \begin{array}{c}             H \\             \overline{1} \\             \overline{5} \\             \overline{8} \\             \underline{-3} \\             \overline{5} \\    $

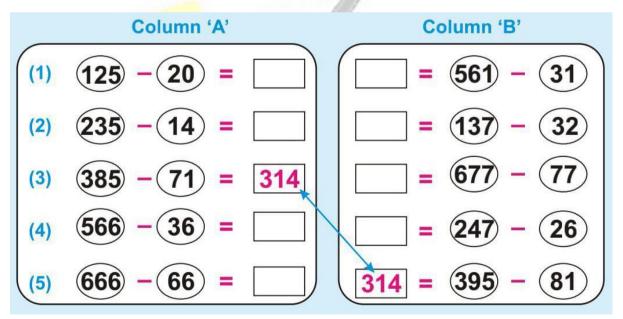
ł ł	ł ł ł ł ł ł	+ + + + +	$ \begin{array}{r}                                     $	7
3	8	7		

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Activity# 7B:								
Solve the following:	·							
H T O 3 8 1	H T 4 5	0 5	H T 3 6	0 9		<u>Н</u> 5	<u>Т</u> 7	0 8
<u> </u>	_	4 _	•••	6	_	C	•	7
H T O	H T	0	H T	0		H	Т	0
7 4 6	6 3	7	8 6	8		11 7	7	9
5	-	3 –		5	_			3
					ĺ	TT		
H T O 1 1 9	H T 5 0	0	H T 3 1	0 3		<u>Н</u> 4	T 2	<b>O</b> 9
- 2	_	5 –	5 1	2	_	т	4	7
		1/-	-					

Solve and then match the correct answer from column A to column B.



Date:		Day:
Find the solution to	each?	
H T O 2 7 6	H T O 3 6 9	H     T     O       6     6     6
- 1 6 3	-232	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
H T O	H T O	H T O H T O
999	8 8 3	5 5 6 4 2 8
- 4 4 4	- 2 6 2	-312 $-115$

### **Topic: Subtraction from 3-digit Numbers with Borrowing**

### Let's learn:

Just like the subtraction from 2-digits number in 3-digit numbers we also use regrouping by borrowing from the tens or hundreds place, if the Subtrahend is greater than the Minuend. As we know ones are subtracted for ones, tens from tens and hundreds from hundreds.

### Subtract 1-digit from 3-digit with borrowing

### Solve 841 - 9

Step1: 9 ones cannot be taken away from 1 ones borrow 1 tens.

1 ten = 10 ones

Therefore 10+1=11 ones Subtraction of ones: 11 - 9 = 2 ones, write 2 at ones place.

Step 2: after borrowing one tens we get 4 tens - 1 tens = 3 tens. There is 8 at hundreds place.

### Subtract 2-digit from 3-digit with borrowing

Solve 739 – 64		Η	Τ	0
		7	3	9
Step1: Subtract ones from ones	_		6	4
9 ones – 4ones = 5 ones.				5

Write 5 at ones place

H | T

8

8 3

34

0

101

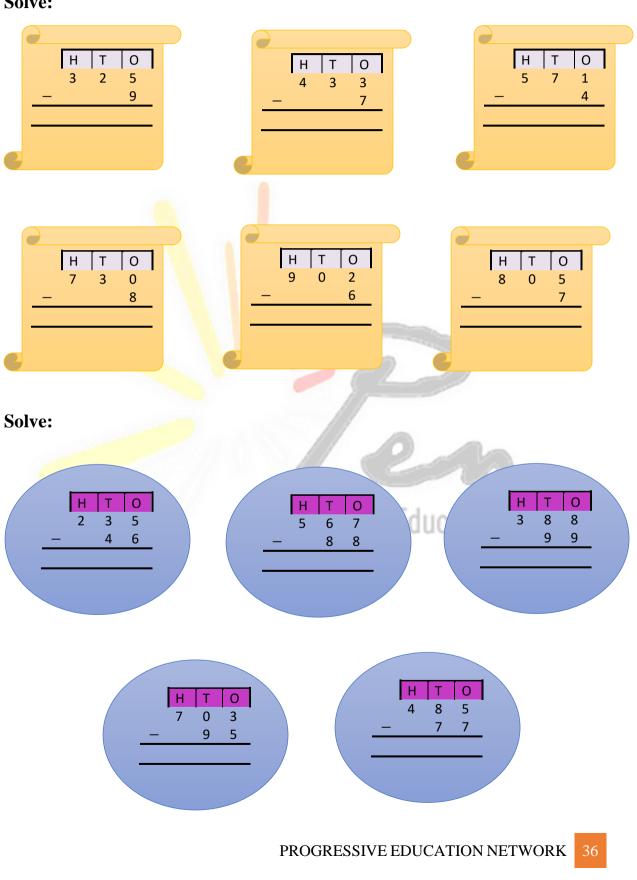
2

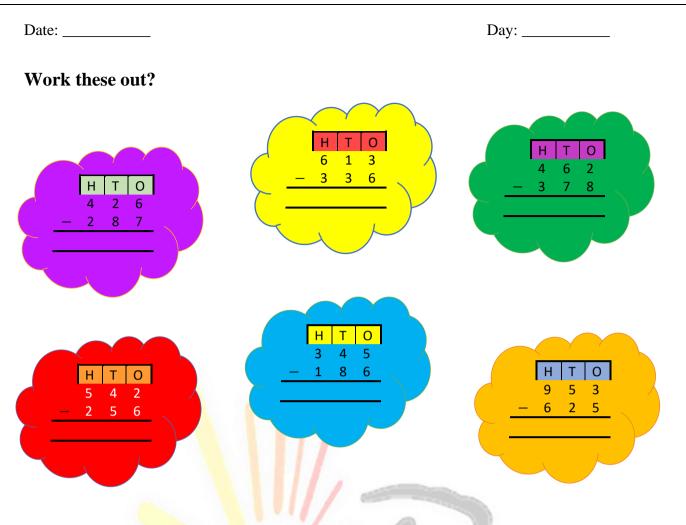
Date:	Day:
Step2: Subtract tens from tens. 6 cannot taken away from 3.	
Therefore borrow one hundred for tens. 1hundred = 10 tens	H T O
Now subtract 6 tens from 13 tens. 13 tens – 6 tens = 7 tens Write 7 at tens place	- 6 4 6 7 5
After borrowing 1 hundred from 7 hundreds. 6 hundred is let hundreds place.	
Subtract 3-digit from 3-digit with borrowing	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
Solve 582 – 294	- 2 9 4
Step1: Subtract ones from ones. 4 cannot be taken away from Therefore borrow one ten from 8 tens.	n 28
1 ten = 10 ones	
12 ones – 4ones = 8 ones. Write at ones place	
Step2: Subtract tens from tens. 9 cannot taken away from 7. one hundred for tens.	Therefore, borrow
1hundred = 10 tens	H T O
Now subtract 9 tens from 17 tens. 17 tens – 9 tens = 8 tens Write 8 at tens place Progressive Education	$-\frac{45}{2}  \frac{1078}{9}  \frac{102}{4}$
After borrowing 1 hundred from 5 hundreds. 4 hundred is let	ft.
4  hundreds - 2  hundreds = 2  hundreds Write 2 at hundreds place.	

Day: \_\_\_\_\_

Activity# 7C:

### Solve:





Noor had a busy day last Sunday.

1. She had 6 bags of flour but used up 4 bags on Sunday. How many bags of flour did she have left?



2. She had 7 boxes of butter and 3 boxes melted on Saturday. How many boxes of butter did she have left?



3. She ordered 8 bags of sugar, but the supplier said that they could only deliver 5 bags of sugar on Monday. How many bags of sugar are left?



Total bags she ordered:

Alina's birthday party was over. She said goodbye to guests and helped to clean up. Solve the problems with the help of a place value chart.

1. There were 21 children at her party. 16 of them were picked up. The rest of them walked home on their own. How many children walked home?



2. Her mother baked 32 cookies and 12 muffins. There were 3 cookies left. How many cookies were eaten at the party?





Progressive Education Netv

• Find the difference.

279 - 6 = \_\_\_\_\_ 607

607 - 2 =

357 - 2 =\_\_\_\_

232 - 2 =\_\_\_\_

Date:		Day:	
• How man	ny are left.		
	2 children.	1 gets on the ride.	
	How many	are left 2 – 1 =	
	3 children.	2 get on the bus.	
	How many	are left 3 – 2 =	
	4 children.	2 get on the bus.	
	How many	are left 4 – 2 =	
	v# 7D:		

Solve the question by identifying the operation of addition and subtraction.

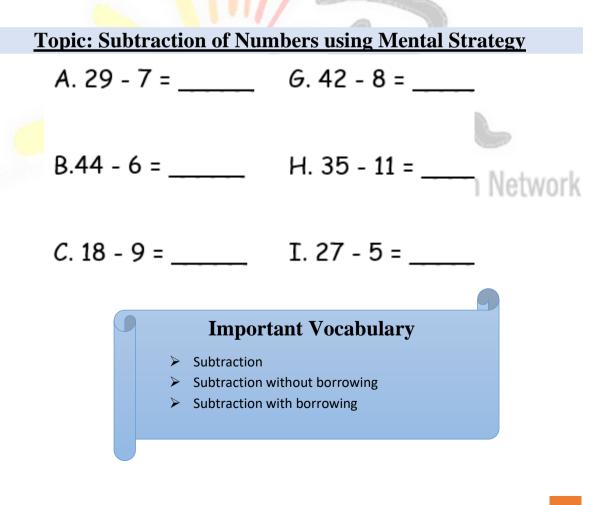
1. 114 birds were sitting in a tree. 21 more birds flew up to the tree. How many birds was there altogether in the tree?

# **Progressive Education Network**

2. 29 birds were sitting in a tree. Some more fly up to the tree. Then there were 142 birds in the tree. How many more flew up to the tree?

3. Sara has 74 crayons. She gave 25 of them away to Maha. How many crayons does Sara have left?

4. There were 28 girls, 35 boys and 3 teachers on the playground at recess. How many children were there in all?



Date:

Day:



# **Topic: Multiplication**

#### **Learning Outcomes:**

After completing these activities, students will be able to:

- Recognize multiplication as repeated addition and use multiplication symbol 'x'. •
- Complete number sequence in steps of 2, 3, 4, 5 and 10.
- Develop multiplication tables of 2, 3, 4, 5 and 10 till multiplication of  $10 \times 10$ .
- Multiply numbers within multiplication from the picture.
- Solve number stories on multiplication up to 1- digit numbers.

## **Topic: Multiplication as Repeated Addition**

## Addition:

2 + 2 + 2 = 6

## Multiplication:

3 groups of 2 is 6 3 times 2 equals 6

 $3 \times 2 = 6$ 

The symbol of multiplication is "×"

### Let's Learn

Multiplication is an operation that represents the basic idea of repeated addition of the same number. The numbers that are multiplied are called the factors and the answer is called as product. Let's look at the example: rogressive Education Network

 $4 \times 2 = 8$ 

It's like repeated addition 4 + 4 makes 8.

We can also say, there are total 8 objects divided in 2 groups each group contains 4 objects. Example # 2:

 $2 \times 4 = 8$ 

But here, there are total of 8 objects divided in 2 groups each group contains 4 objects.

# Activity# 8:

#### **Complete these sentences.**



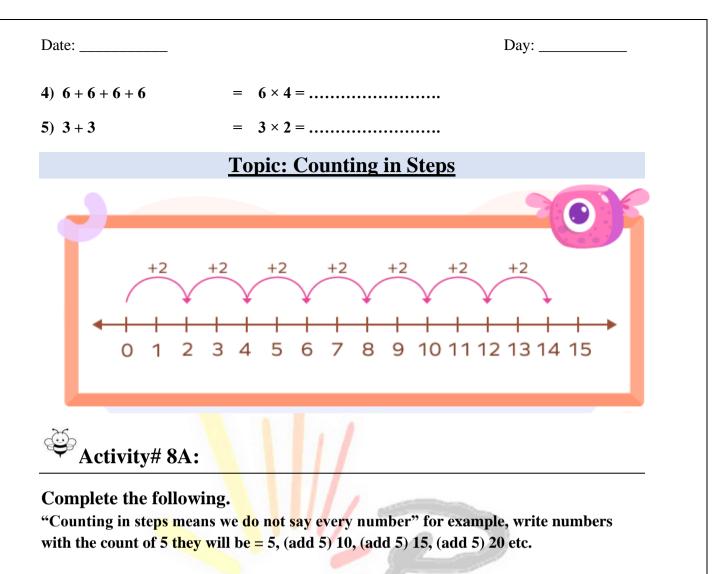
Here are	_groups of	apples.
Total apples are	e×=	•



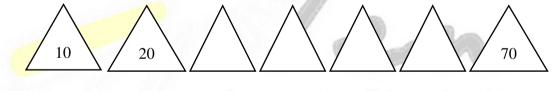
Date:	Day:
	Here aregroups of vases. Total vases are×=
RRRRR	Here aregroups of keys.         Total keys are×=
	Here aregroups oftennis balls. Total tennis balls are×= 
Draw 1 group of 3 Mangoes:	
Write an addition sentence and a m	ultiplication sentence for each
<sup>2.</sup>	
+=	+=
× =	× =
+++++	+ =

Examine both equations; write the answer in front of each row.

<b>1</b> ) <b>8</b> + <b>8</b> + <b>8</b>	=	8 × 3 =
2) 7+7+7+7+7	=	7 × 5 =
<b>3</b> ) <b>9</b> + <b>9</b> + <b>9</b>	=	9 × 3 =



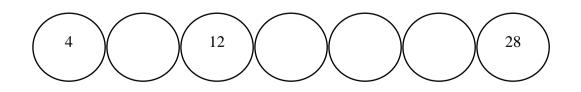
1. By counting in steps of 10.



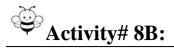
2. Counting in steps of 3.

3 6	15	24
-----	----	----

**3.** By counting in steps of **4**.



Day: \_\_\_\_\_



### Tables of 2:

X	_1	2	3	4	5	6	7	8	9	10
2	+2	4								

Table of 3:

<b>x</b> <u></u> <b>←</b> 1	2	3	4	5	6	7	8	9	10
3 → 3									

Table of 4:

<b>x ←</b> 1	2	3	4	5	6	7	8	9	10
4+4									
Table of 5:				117			-		

<b>x</b> <sub>4</sub> −1	2	3	4	5	6	7	8	9	10
5 →5									

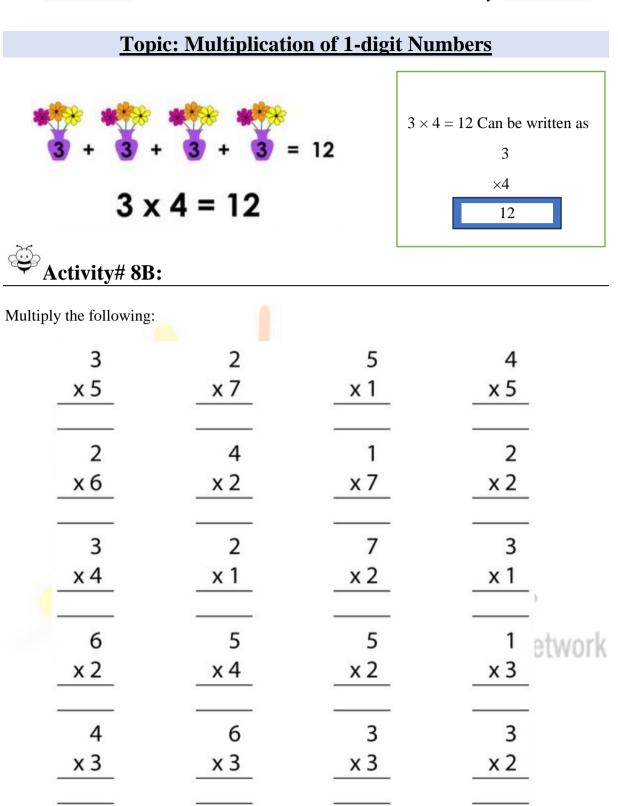
Table of 10:

X	_1	2	3	4	5	6	7	8	9	10	work
10-	<mark>≁10</mark>										

## **Important Vocabulary**

- Repeated addition
- Multiplication
- Counting in steps
- Multiplication table

Date:	
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Day: \_\_\_\_\_

Activity# 8c:

#### Word problems:

1. The price of one eraser is Rs 6. Find the price of 5 erasers.

2. A shirt has 7 buttons. Find the number of buttons in 5 shirts.

3. A ceiling fan has 3 wings. How many wings do 10 fans have?

4. A child has 2 arms. How many arms do 7 children have?



5. A cow has 4 legs. How many legs do 6 cows have?









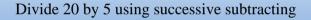
#### **Learning Outcomes:**

After completing these activities, students will be able to:

- Recognize and use division symbols '÷'.
- Recognize division as successive subtraction.
- Divide numbers within the multiplication tables with remainder zero.
- Solve number stories involving division up to 1-digit numbers.
- Solve real life situation involving addition, subtraction, multiplication and division. Give reasons for choosing the correct operation.

## **Topic: Division as Successive Subtraction**

Repeated subtraction is subtracting the same number from a large number until the end result is zero or less than the number being subtracted. This process is also called division.



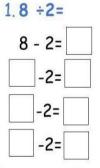
 $20-5=15 \longrightarrow 1^{st}$  $15-5=10 \longrightarrow 2^{nd}$  $10-5=5 \longrightarrow 3^{rd}$  $5-5=0 \longrightarrow 4th$ 

#### **Try Yourself**

Subtracting 5 four times, we get 0

So,  $20 \div 5$  we get 4

# **Progressive Education Network**



How many times did you remove 2 from 8?

Therefore 8÷2=

# **Topic: Division**

#### Let's Learn

The division is a mathematical operation that involves the sharing of an amount into equalsized groups. For example, "8 divided by 4" means "8 shared into 4 equal groups", which would be 2. It is written as:  $8 \div 4 = 2$ 

For example, we can divide a group of 20 members into 4 groups of 5 members each. In the above example, we have been given the total number and the groups; we just need to adjust the 20 members equally in 4 groups.

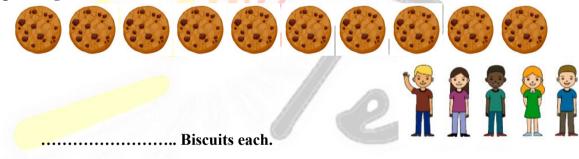


#### Fill in the blanks.

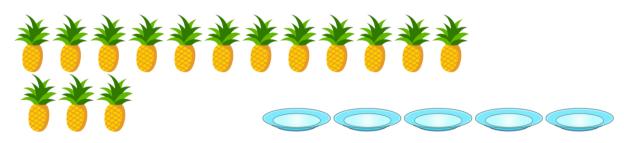
1) Maha has 20 sweets, she wants to share them equally among her 2 friends, how many sweets each of her friend gets?



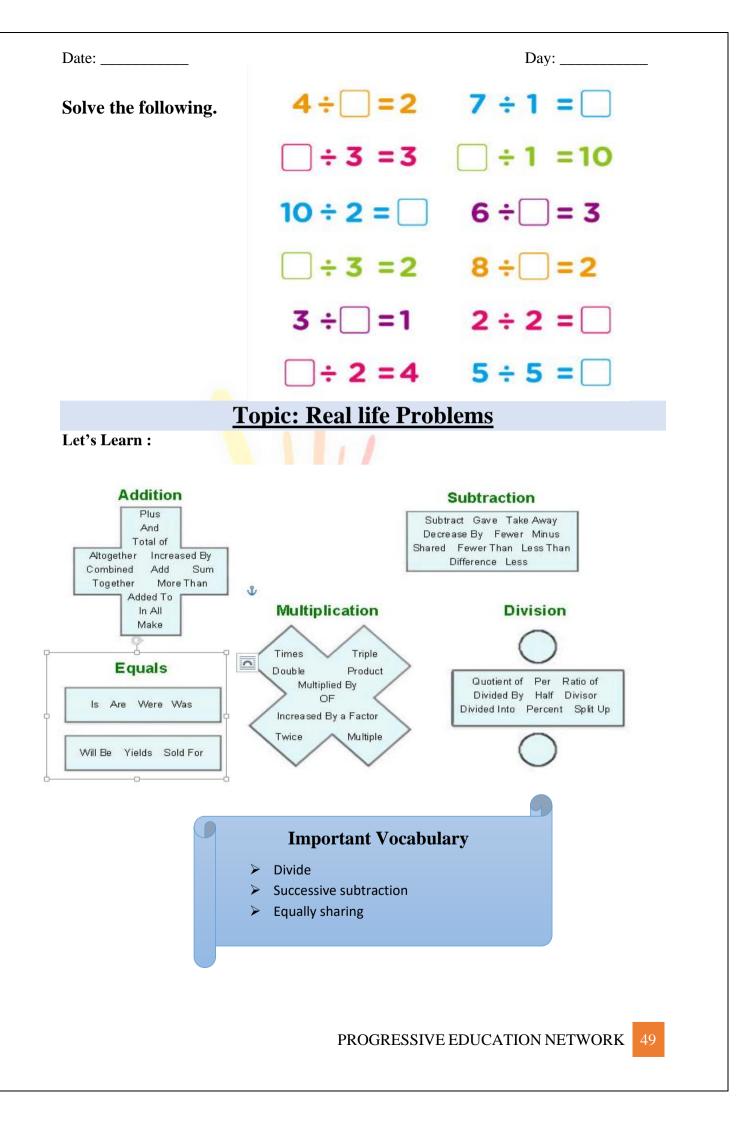
2) There are 10 biscuits, share equally between 5 people, how many biscuits does each person gets?



3) Share 15 pineapples equally between 5 plates. How many pineapples are there on each plate?



..... Pineapples each plate.



Day: \_\_\_\_\_

Date:

Step 1	Read the problem carefully.
Step 2	Underline the clue words to identify the correct operation.
Step 3	Draw a picture, if needed
Step 4	Write a number sentence.
Step 5	Solve the word problems

#### Solve the number stories using following steps.

#### Word problems.

Maham has a lot of art materials. She needs to organize all these materials into containers.

1. She counted her crayons and found out that she has 80 crayons which she will place in crayon boxes. Every crayon box can contain 8 crayons. How many crayons boxes does she need?



2. 2 piles of clean white papers were stacked in the corner of her room. She decided to place these papers in paper envelopes which can hold 10 papers each. How many paper envelopes does she need if she has 20 clean white papers?

Date:	
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3. She thought of placing an equal number of paintings in four of the rooms in the house. If she has 32 paintings, how many paintings will be placed in each of the four rooms?



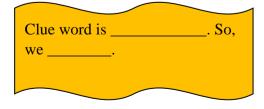
#### Word problems.

Read the following statements carefully. Solve the problem and identify the correct operation:

1. Raza bought a football in Rs.250, a book in Rs. 135 and a cake in Rs. 350 how much amount did he pay altogether?



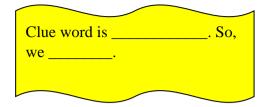
2. The cost of 3 erasers is Rs.18. Find the cost of one eraser by sharing the cost?



Date:
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Day: \_\_\_\_\_

3. Every child is given 4 pencils. How many pencils do 5 children's have altogether?



4. There are 364 students in girl's school. 57 students were absent on last Monday. How many were left present on that day?

Clue word is	So,
we	

5. Salma subtract 320 from Haleema's number, Salma gets 800. What is Haleema's number?

			vord is	So,
How many operaticlue name them. Ans:	on use the "altogether	" as a	tion Networ	ĸ



## **Unit # 3: Fractions**

# **Topic: Fractions**

Day: \_

#### Learning Outcomes:

After completing these activities, students will be able to:

• Recognize fractions as equal parts of a whole.

Identify half, one third and quarter with the help of objects and figures (without writing  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ )

- Represent half, one third and quarter in numerical form  $(1/2, 1/3 \text{ and } \frac{1}{4})$
- Shade the equal parts of a given figure to match a given fraction.
- Recognize and name unit fractions up to 1/10.
- Recognize fractions like two thirds (2/3), three fourths (3/4), four fifths (4/5), up to nine tenths (9/10).

## **Equal Parts**



When we share something, we **divide** it **equally**. We call these fair shares! For example, if I have one whole cookie, and I want to share it equally with my friend, I will

divide it into two equal parts. This means that each part will be of same size.

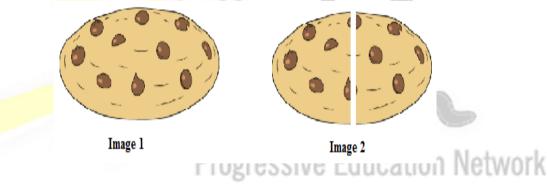


Image 1: one whole cookie, image 2: divided into two equal parts

Do you Know? Equal parts have the same shapes and size.

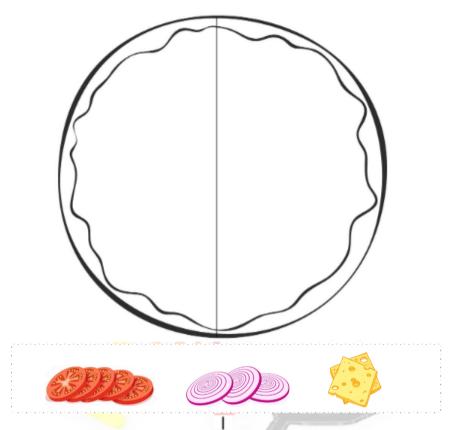
Date:	_		Day:
	<u>T</u>	opic: One-Ha	lf
	1 whole	1 half	1 half
	Two halve	s together make	one whole.
• Study each	shape <mark>. C</mark> olour t	h <mark>e s</mark> hapes that a	are cut in equal parts.

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Day	٠	-

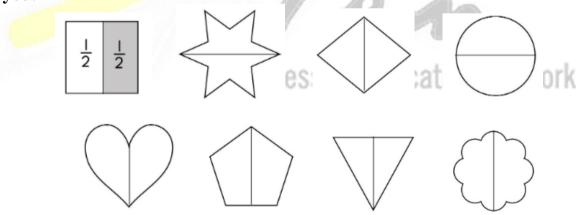
#### Make a pizza.

Draw the toppings.

Put tomatoes on one half, and onions on the other half. And cheese on the whole pizza.



Colour half of each shape and write  $\frac{1}{2}$  on the both side. One has been done for you.



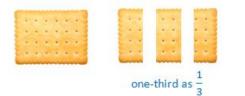
Draw the cake and cut it into one-half.

Date:
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Day:	
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## **Topic: One-third**

For example, suppose the biscuit is cut into three equal parts. Each part is called one third of the biscuit. We write one-third as 1/3.



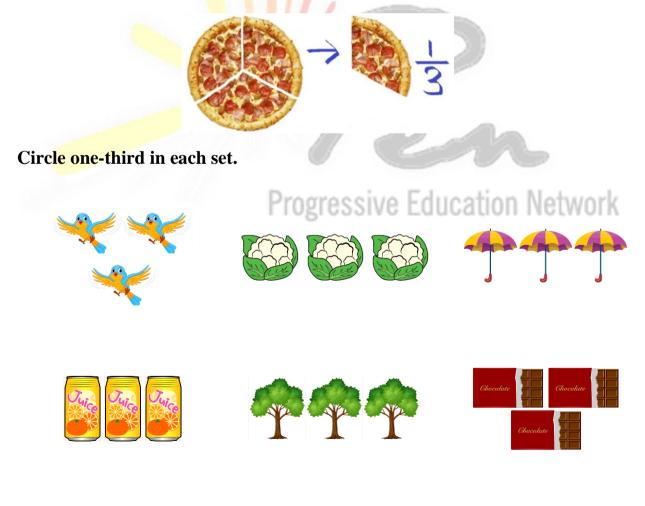
Look at another example:



Each shaded part is one-third of the whole.

# Activity# 11:

One third is one part of three equal parts. Ayaan bought pizza for his friends Hassan and Maher, he cut the pizza into three part, each one gets 1/3 of the whole pizza.

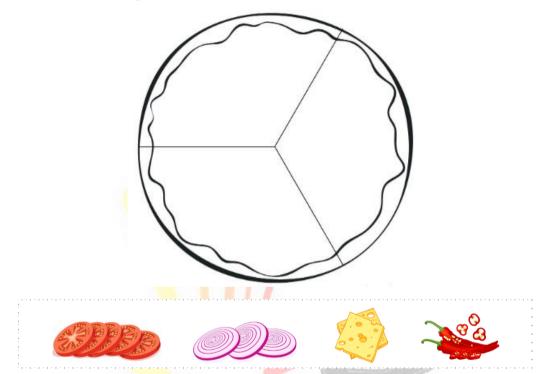


Day: \_\_\_\_\_

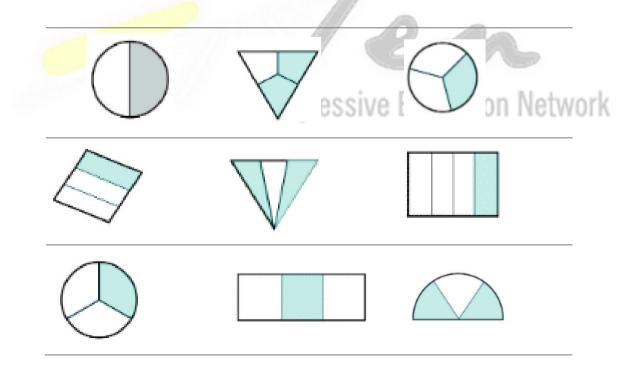
#### Make a pizza.

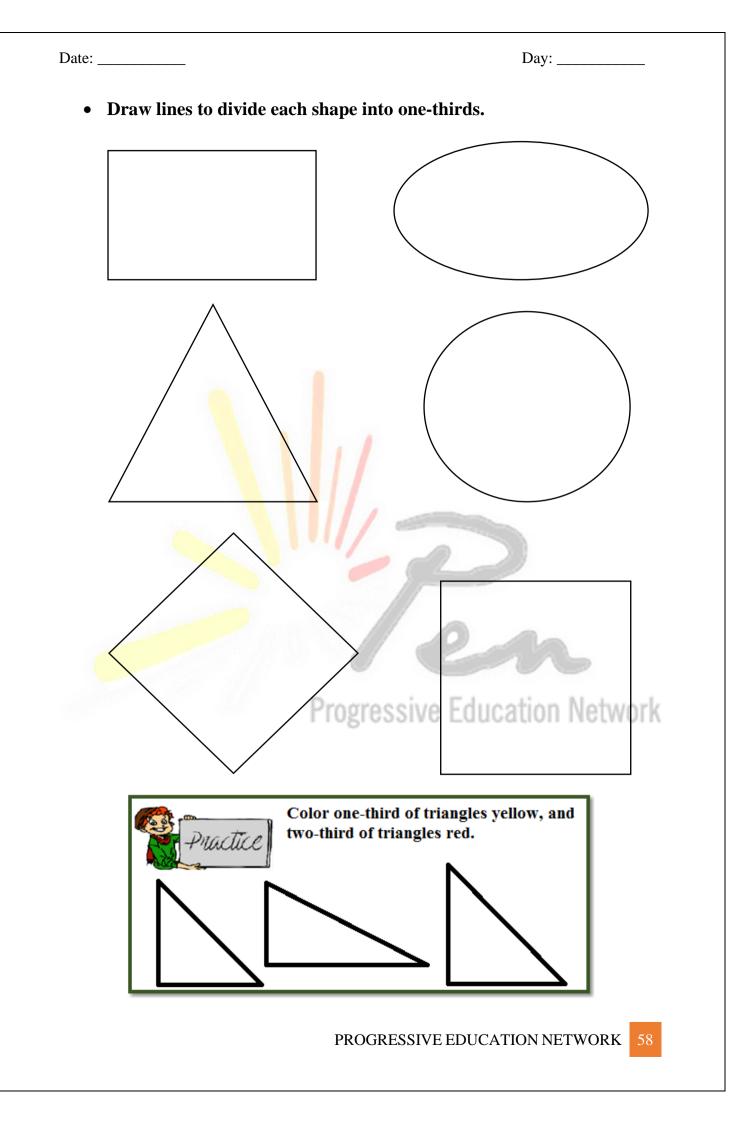
Draw the toppings.

Put tomatoes on one third, onions on the other third, and chili another third. And cheese on the whole pizza.



• Circle the correct diagram, which shows the one-third fraction.





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Duy	•	_

### **Topic: One-Quarter**

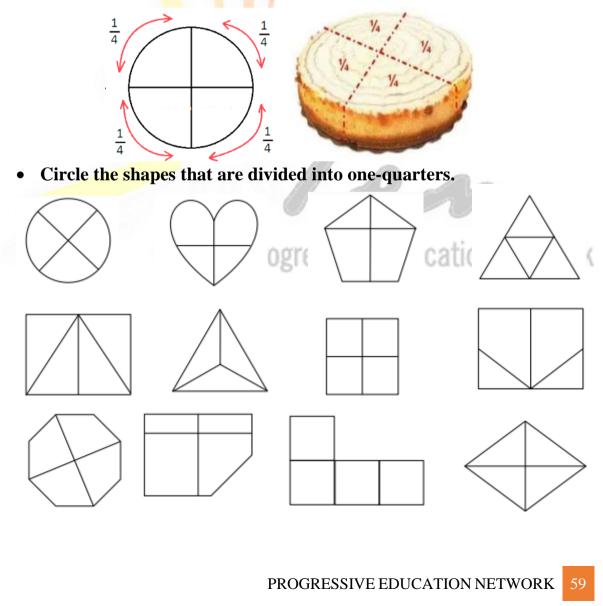


When we divide a whole or a group into four equal parts, each part is called as one-quarter of the whole or the group. We express one-fourth by the symbol <sup>1</sup>/<sub>4</sub>



For example, suppose the pizza is cut into four equal parts. Each part is one-fourth or onequarter of the pizza. We write one-fourth as  $\frac{1}{4}$ . Let's look at the example.

There are four members in Saad's family. Michael divides a cake into 4 equal parts and each one of them gets equal share. When a whole is divided into 4 equal parts, and each part is called one-quarter.

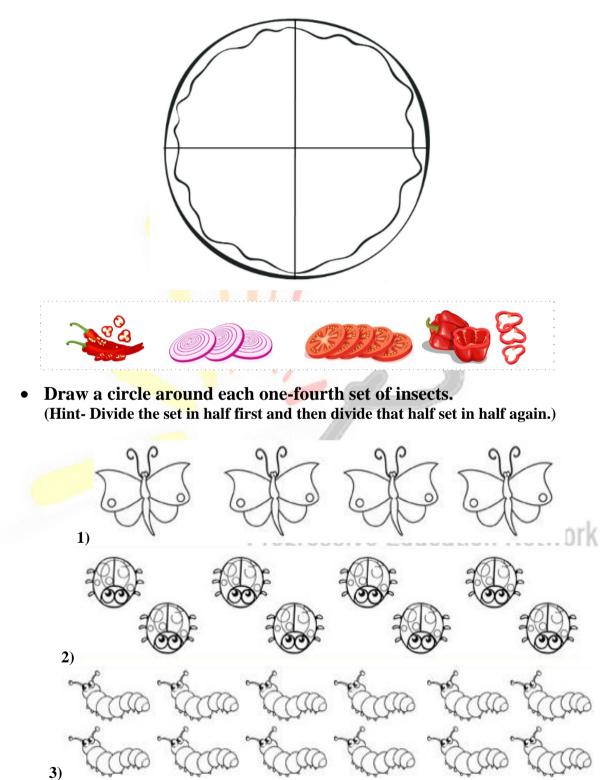


Day: \_\_\_\_\_

• Make a pizza.

Draw the toppings.

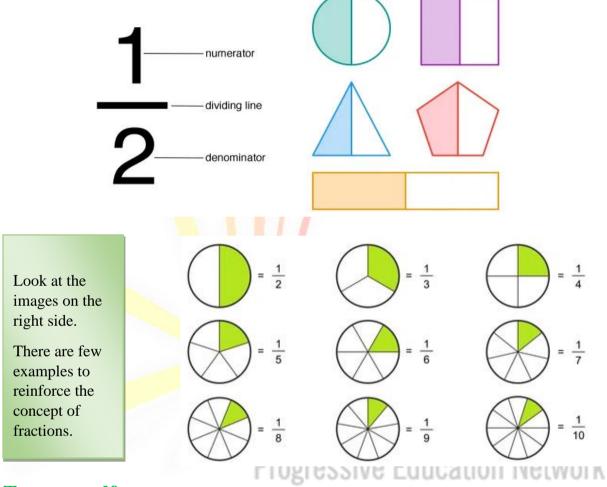
Chilies, Onions, Tomatoes, and Capsicums. Put one topping on each quarter.



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Day: ____
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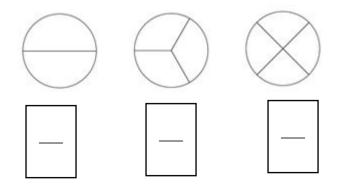
## **Topic: Fraction in Numerical Form**

The number on the top is called the numerator, and the number on the bottom is called the denominator. The numerator defines the number of equal parts taken, whereas the denominator defines the total number of equal parts in a whole. For example, 1/2 is a fraction. Here, 1 is a numerator and 2 is a denominator.



### **Try yourself**

Colour one part of each shape and write fraction for the coloured part.



PROGRESSIVE EDUCATION NETWORK 61

Day: \_\_\_\_\_

# **Topic:** Fractions from $\frac{1}{2}$ to $\frac{1}{10}$

Fraction	Figure	Name of Fraction
1/2		One Half
$\frac{1}{3}$	$\bigcirc$	One Third
$\frac{1}{4}$	$\bigcirc$	One Quarter
<u>1</u> 5	$\langle \rangle$	One Fifth
<u>1</u> 6	$\bigotimes$	One Sixth
$\frac{1}{7}$	$\otimes$	One Seventh
1 8	()	One Eighth
$\frac{1}{9}$	$\langle \! \rangle$	One Ninth
1 10	$\otimes$	One Tenth

ork

## **Topic: More about Fractions**

## Let's learn:

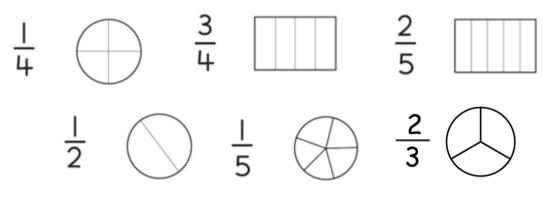
So far, we have about unit fractions i.e., fractions that have only one part out of all the parts taken. Now we will at fractions that have different parts taken from them like two-thirds, five-sixth, and three-fourth, etc.

Shape	Equal Parts	Coloured Parts	Fra	iction
			In words	In figures
	3	2	Two- third	$\frac{2}{3}$
	4	3	Three-fourth	$\frac{3}{4}$
	8	6	Six- eighth	$\frac{6}{8}$
	5	3	Three-fifth	$\frac{3}{5}$

# **Progressive Education Network**

Activity# 13:

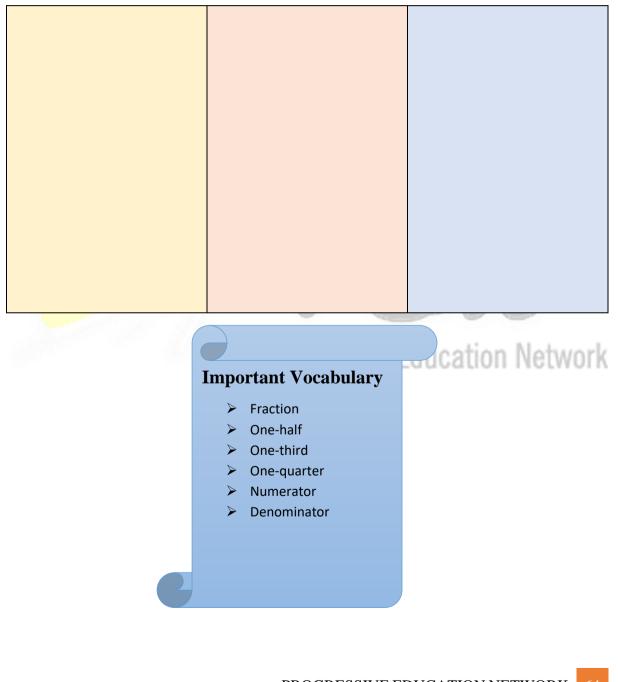
Colour the fractions.



PROGRESSIVE EDUCATION NETWORK 63

Date:		Day	
CHALLENGE	Colour and write th	e fractions in numer	als.
Four fourths =	Three fourths =	Three thirds =	Two fourths =

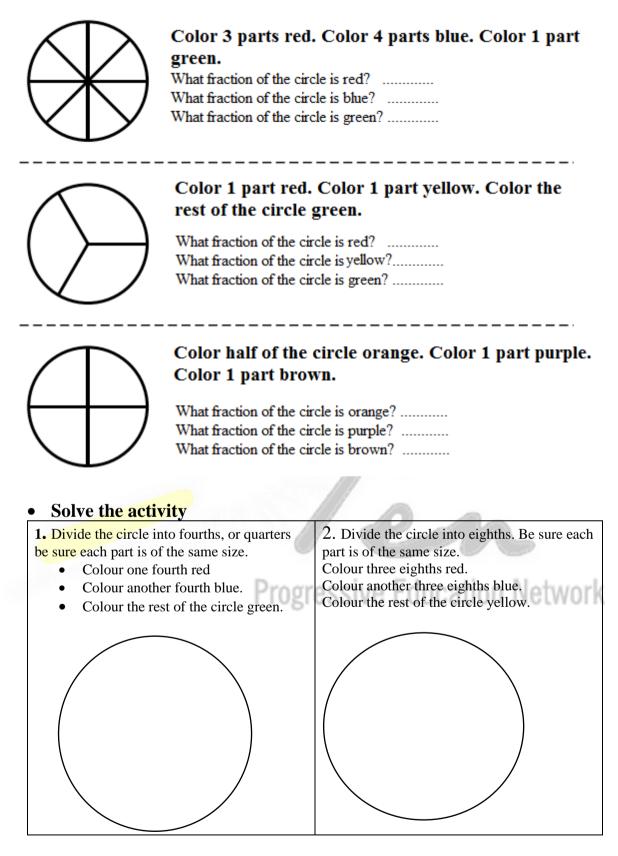
Draw your own set of fractions. 1/10, 5/6 and 7/9.



Day: \_\_\_\_\_

Date: \_\_\_\_\_

#### **Colour fractions circle.**



PROGRESSIVE EDUCATION NETWORK 6

Day: \_

Date:

## Unit # 4: Measurement

#### **Learning Outcomes:**

After completing these activities, students will be able to:

- Compare the lengths of different objects. •
- Recognize the units of length (metre and centimetre)
- Use standard metric units of length (metre and centimetre) and their abbreviation to measure and record lengths of variety of objects.
- Use addition and subtraction within 100 to solve real life situations involving lengths in same units
- Compare the mass of different objects.
- Recognize the units of mass, i.e., kilogram, gram.
- Use standard metric units of mass (kilograms and grams) and their abbreviation to measure and record mass of variety of objects.
- Use addition and subtraction within 100 to solve real life situation involving mass in same units.
- Compare capacity of different objects using nonstandard units (jug, glass, cup, etc)
- Recognize and use the standard metric units of capacity, i.e., litre and millilitre.
- Use addition and subtraction within 100 to solve real life situation involving capacity in same units.

# **Topic: Length**

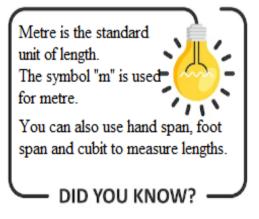
#### Let's Learn

Length is defined as "the measurement or extent of something from end to end/how long the object is.

For example: length of the classroom floor, length of a blackboard, length of a pencil.

It also measures distance: distance from your home to school, distance between two cities. Standard units to Measure length: Metre and Centimetre.

# Progressive Education Network



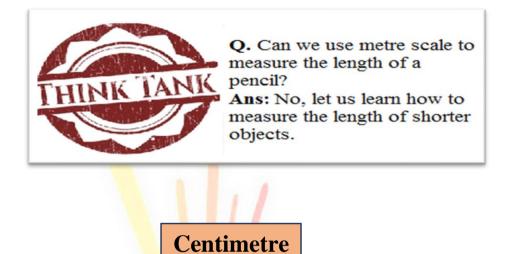
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Day	•

## Metre

### <u>1m=100cm</u>

The lengths of rope, wire, ribbon, table, etc. are measured in metre.



The symbol "cm" is used for centimetre. The ruler is divided into 10 equal parts. The length of each part is 1cm.

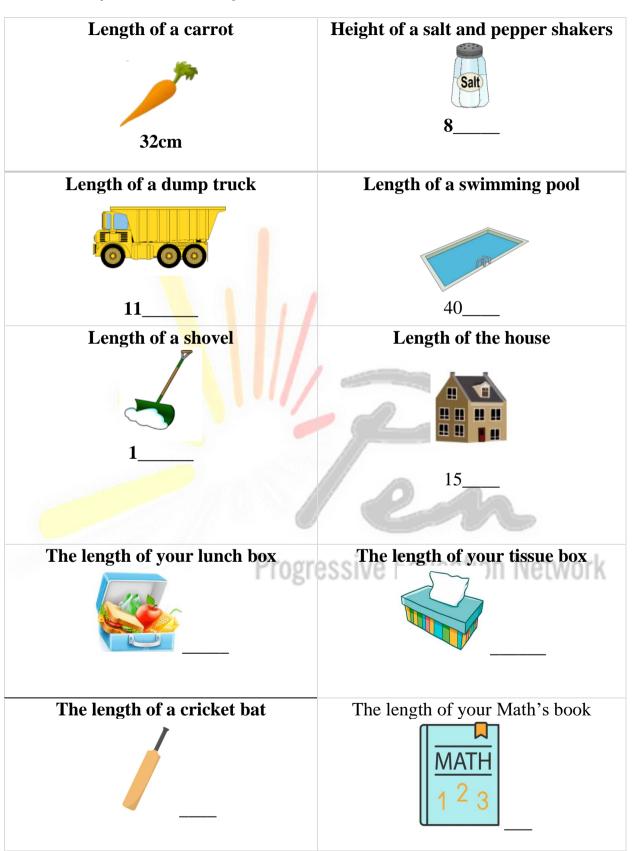
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1 1									· • •	·
0	1	2	3	4	5	6	7	8	9	10
_										

# **Progressive Education Network**

Centimetres are used to measure the lengths of shorter objects.

Date:	

• Fill in the proper units (cm or m) for each measurement. One has been done for you. In last four just mention cm or m.



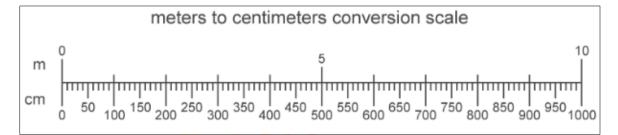
Date:	Day:
Activity # 14	
• Measure the lengths of the pict	tures using a centimeter ruler.
VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	
	- en
Р	rogressive Education Network
CHALLENGE	in cm indicated by the pointer on ruler.
6 7 8 9 10 11	12 13 14 15

## **Topic: Addition and Subtraction in Length**

#### Let's Learn:

We have learned the addition and subtraction of up to 3-digit numbers. But to learn addition and subtraction in length we have to learn convergence from one unit of length to another unit of length.

#### • Convert metres into centimetres. (1m=100cm)



For example, here's how to convert 5 metres to centimetres using the formula above.

 $5m= (5 \times 100) = 500 \text{ cm.}$ a)  $83 \text{ m} = \_ ___ \text{cm}$ b)  $21 \text{ m} = \_ \_ \text{cm}$ c)  $63 \text{ m} = \_ \_ \text{cm}$ d)  $48 \text{ m} = \_ \_ \text{cm}$ e)  $55 \text{ m} = \_ \text{cm}$ f)  $72 \text{ m} = \_ \_ \text{cm}$ f)  $72 \text{ m} = \_ \_ \text{cm}$ f)  $91 \text{ m} = \_ \_ \text{cm}$ f)  $91 \text{ m} = \_ \_ \text{cm}$ f)  $12 \text{ m} = \_ \_ \text{cm}$ f)  $12 \text{ m} = \_ \_ \text{cm}$ f)  $6 \text{ m} = \_ \_ \text{cm}$ 

• Convert centimetres into metres.1cm is equal to one-hundredth (1 ÷ 100) of a metre.

For example, here's how to convert 5 centimetres to metres using the formula above.

 $5cm = (5 \div 100) = 0.05m.$ 

- a)  $800 \text{ cm} = \__m$
- b) 200 cm =\_\_\_\_m
- c)  $600 \text{ cm} = \__m$
- d)  $500 \text{ cm} = ___m$
- e) 700 cm =\_\_\_\_m

- f)  $400 \text{ cm} = \__m$
- g) 300 cm =\_\_\_\_m

h) 900 cm = \_\_\_\_\_m

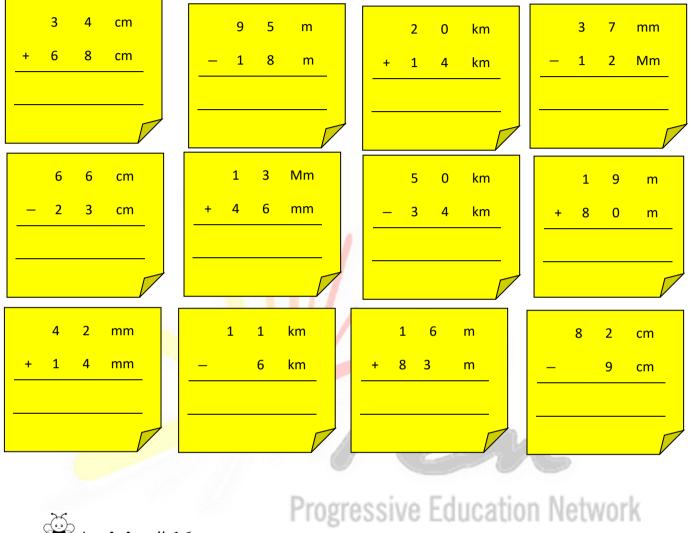
- i) 1000 cm =\_\_\_\_m
- j) 342 cm =\_\_\_\_m

PROGRESSIVE EDUCATION NETWORK 70

Day: \_\_\_\_\_



## Solve the following:



🛱 Activity # 16

### • Solve the following word problems.

1. The difference between the height of Eman and Aleena is 16 cm. if Eman's height is 135 centimetres, what is the height of Aleena if she is taller than her sister?

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2. Line A is 17 centimetres long and Line B is 29 centimetres long. What is the total length of both the line?

**3.** Hassan has three rulers: a white one that is 15 cm long, yellow one that is 25 cm long and a brown one that is 10 cm long.

a. Which ruler is shortest?

b. Compared to the shortest ruler, how much longer is the longest ruler?

c. Hassan's pencil case is 20 cm long. Which rulers cannot fit in his pencil case?

d. What is the length of the longest line he can draw when he puts together that white and yellow ruler?

e. The white ruler breaks into two pieces. If one piece is 6cm long, what is the length of the other piece?

Day: \_\_\_\_

f. Hassan buys a blue ruler replace the broken white one. The new blue ruler is 18cm long. Compared to the white ruler, how much longer is the new blue ruler?

4. Danyal's teacher asked her students to measure the things inside their school bags. They had a great day measuring things with their classmates.

a. Danyal's pencil is 22 cm long. Ali's pencil is 16 cm long, Umar's pencil is 15cm long. How much longer than Umar's pencil is Danyal's pencil?

b. Mahad cuts 3 strips of tape. He uses 10 cm of tape for his notebook, 8 cm tape for his book, and 6 cm of tape for his art project. How many centimetres of tape did he use altogether?

# Progressive Education Network

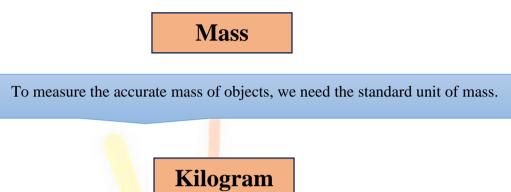
c. Fahd has 3 books in his bag. His reading book is 15 cm wide; his math book is 21 cm wide, and his science book is 22 cm wide. How much wider than his reading book is his math book?

### **Topic: Mass**

#### Let's learn:

Mass is used to measure how heavy an object is. For example: the mass of a book, the mass of a table and the mass of a chain.

The most commonly used unit of mass are kilogram (kg) and gram (g). When its commons to object that are very heavy tonne (t).



A Kilogram is a unit of measurement used to measure much heavier objects. For example, a one-liter bottle of soda has a mass of about 1 kilogram. Fruits such as small watermelons and pineapples also have a mass of around 1 kilogram. We can abbreviate the unit kilogram with the letters kg.

Gram

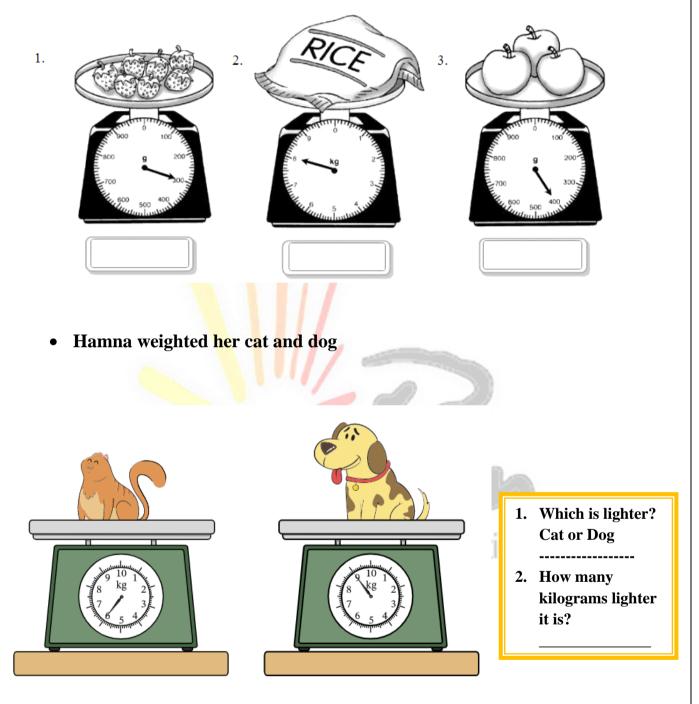
Gram is the unit of mass. The symbol 'g' is used for gram. It is used to measure the mass of lighter objects like pencil, biscuit, etc.

# Progressive Education Network

Day: \_\_\_\_\_



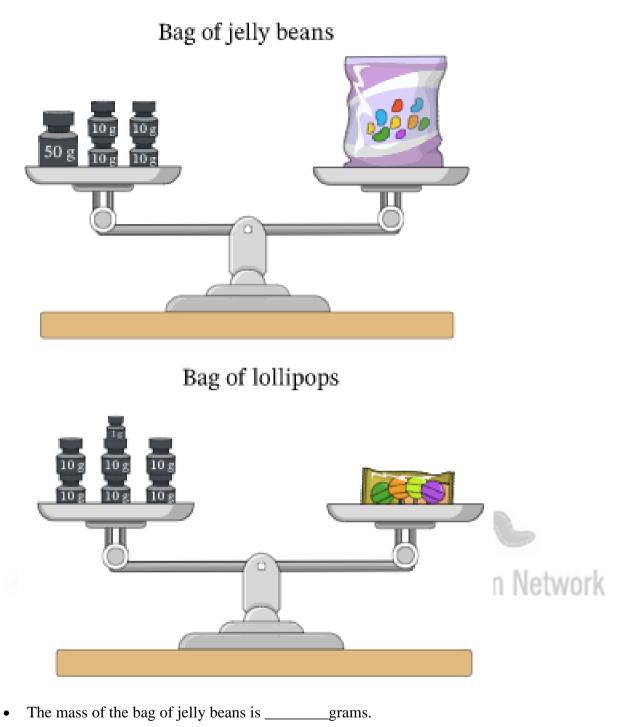
## • Write the weight of the following objects.



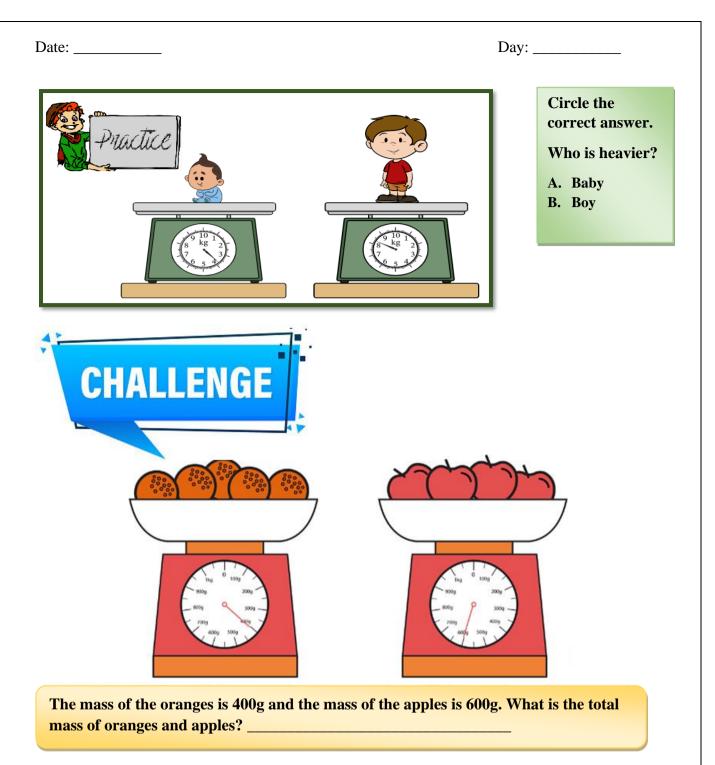
Date:		Day:	
• Choose the suitab	le unit, and circle	it.	
Kg/g	Kg/g	Kg/g	Kg/g
Kg/g	Kg/g	Kg/g	Kg/g
Kg / g • Fill in the blanks.	Kg/g	Kg/g	Kg/g
• Fill in the blanks. The mass of the box		kg heavier than the n	nass of the box
of toys.			
			Network
The mass of box of book	as is 31 kg	The mass of box of to	ys is 25 kg
			•••••
	PRO	GRESSIVE EDUCATION	NETWORK 76

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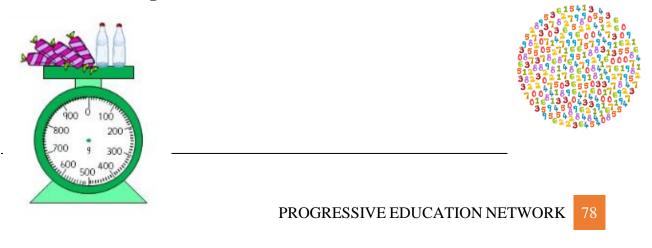
• Finish these sentences to describe the masses of the bags.



- The bag of lollipops. is \_\_\_\_\_grams.
- The bag of \_\_\_\_\_is the heaviest.
  - A) Lollipops B) Jelly beans



• 4 sweets weigh 200g. Two bottles of water weigh 300g. Draw and arrow to show the weight of the 6 items.



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# **Topic: Addition and Subtraction of Masses** Solve the following: 2. 1. 46 g 17 kg + 9 kg + 36 g 3. 4. 86 kg 72 g + 9 kg + 36 g Solve the following: 1. 17 kg 56g -30 g - 8 kg Progressive etwork 3. 4. 51 kg 60 g - 22 kg - 25 g PROGRESSIVE EDUCATION NETWORK 79

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#### • Solve the following word problems.

**1.** Ali has 45kg of wheat in his shop which he wants to sell. He sold 24 kg of wheat today. How much wheat is left that needs to be sold know?



2. A pencil weight 12 g, an eraser weighs 35 g. What is the total weight of all the things?



3. Sara is 16 kg heavier than her brother who weighs 87 kg. What is the weight of Sara?



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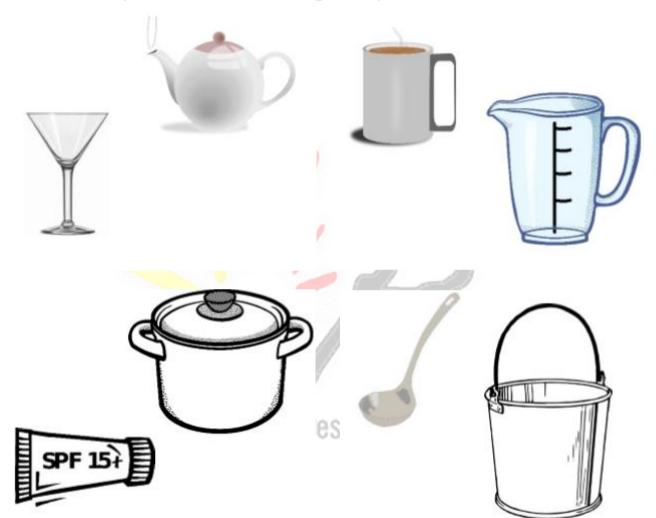
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## **Topic: Capacity**

The amount of liquid a container can hold is called its capacity here the amount of water that the jar is holding is called the capacity of the jar. we measure the capacity of a container. in liters and milliliters, a liter is represented like this milliliter is represented like this liter is the bigger unit.

Activity # 19

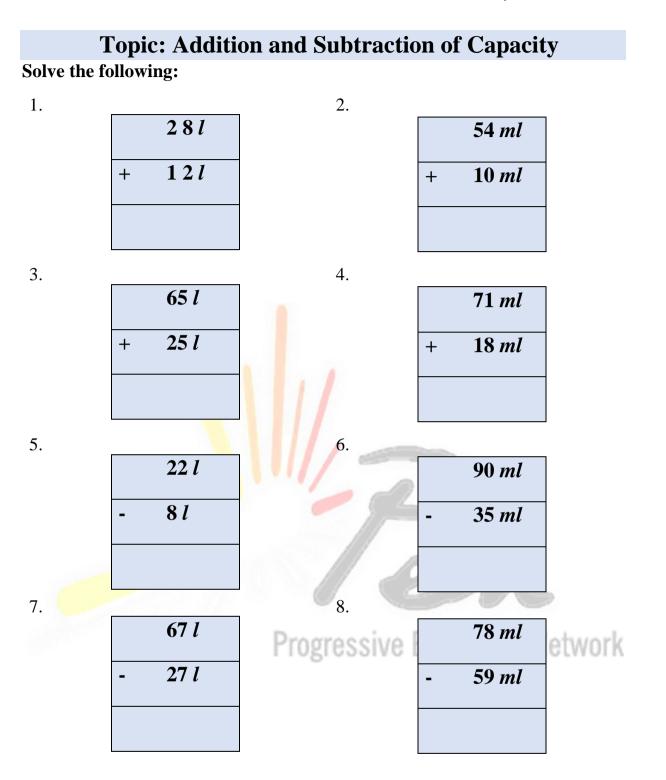
## **Circle the object that holds more quantity?**



ate:	Day:
Topic: Stand	lard Unit of Capacity
Let	's Learn
A <b>milliliter (ml)</b> and <b>liter (l)</b> are system.	two units to measure capacity in the metric
milliliter (mL) measure small amounts of liquids.	liter (L) measure larger amounts of liquids.
(1 mL)	A bottle has about 1 liter of liquid.
A dropper holds about 1 milliliter of liq	auid.
11=	$=1000 \ ml$
Activity # 19A	
· · · · · · · · · · · · · · · · · · ·	e to measure the capacity of each. Write
(ml) and $(l)$ .	, to incustric the cupacity of cuchi (())
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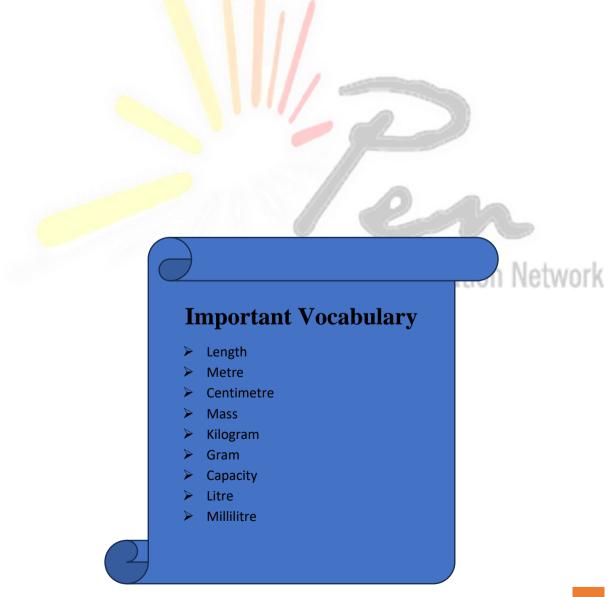
Words problems:

1.My mother filled 4 cups of milk from 1 liter.



2.How much milk will be required to fill 8 cups \_\_\_\_\_

A milkman bought 75 l of milk and sold 68 l of milk. How much milk is left with him?



PROGRESSIVE EDUCATION NETWORK 84

#### Day: \_\_\_\_\_

## Unit # 5: Time

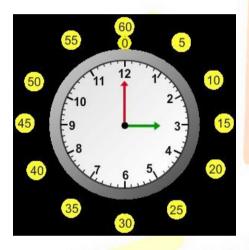
#### Learning Outcomes:

After completing these activities, students will be able to:

- Recognize the number of hours in a day and number of minutes in an hour.
- Read and write the name from a clock in hours and minutes (with five-minutes interval)
- Recognize a.m. and p.m.
- Draw hands of a clock to show time hours and minutes (with five minutes interval)
- Use Solar Calendar to find a particular date/day.
- Use Islamic Calendar to find a particular date/day.

### **Topic: Hours and Minutes**

#### Let's Learn



The dial of the clock is divided into 12 big parts. Each big part is further divided into 5 equal small parts. One small part represents one minute.

The dial of the clock is divided into 60 equal small parts.

The minute hand moves from one number to the other number in 5 minutes.

When the minute hand completes one round in 60 minutes, then the hour hand moves to the next number. So, there are 60 minutes is an hour.

There are 24 hours in a day because hour hand completes two rounds in a day.

60 minutes =1

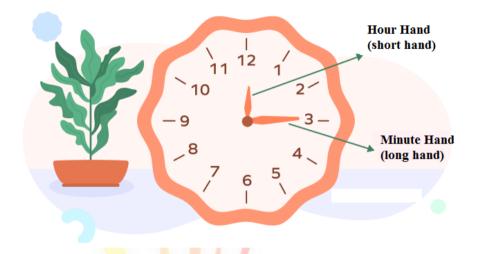
**24 hours =1 day** 



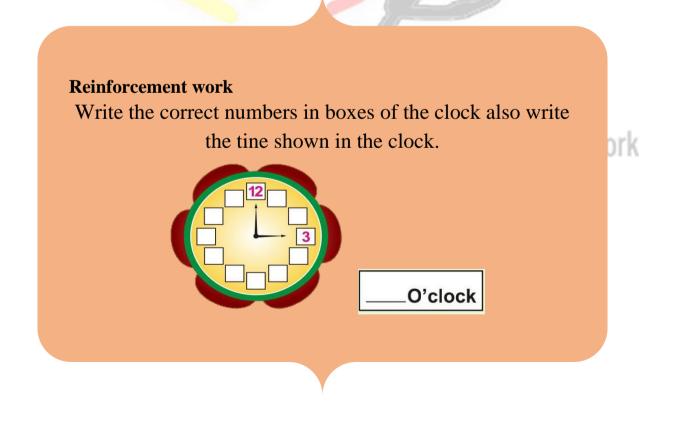
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## **Topic: Reading and Writing the Time**

### Let's understand the concept of an hour more clearly with the help of a clock.



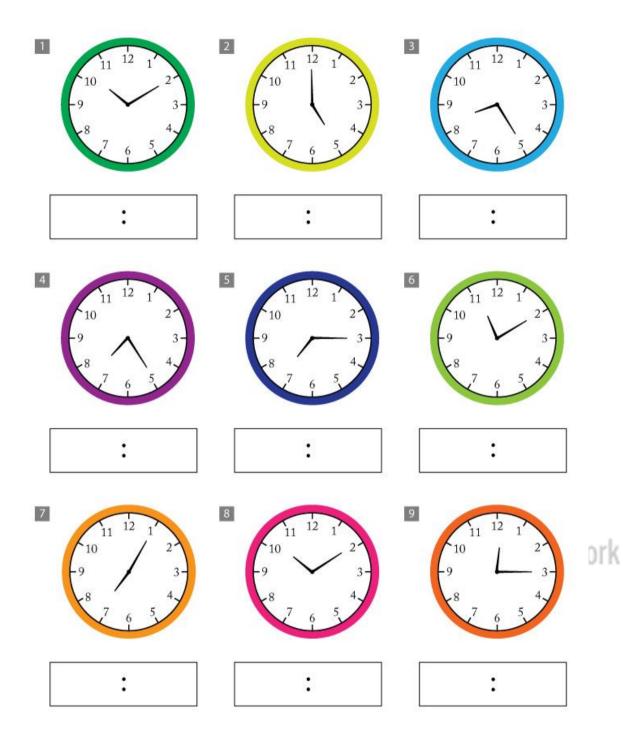
In the image given above, looking at the clock, the hour hand is at 12, and the minute hand is at 3. (The time is 12:15).



Day: \_\_\_\_\_

## **Try Yourself**

Write the time for each clock.



Day: \_\_\_\_\_

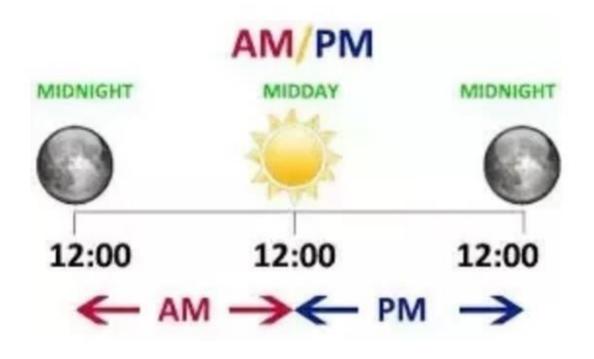
# Activity # 20

#### Fill in the blanks.

1. The long hand of the clock shows \_\_\_\_\_.

- 2. The Short hand of the clock shows \_\_\_\_\_.
- 3. There are \_\_\_\_\_ hours in two days.
- 4. There are <u>hours in a week</u>.

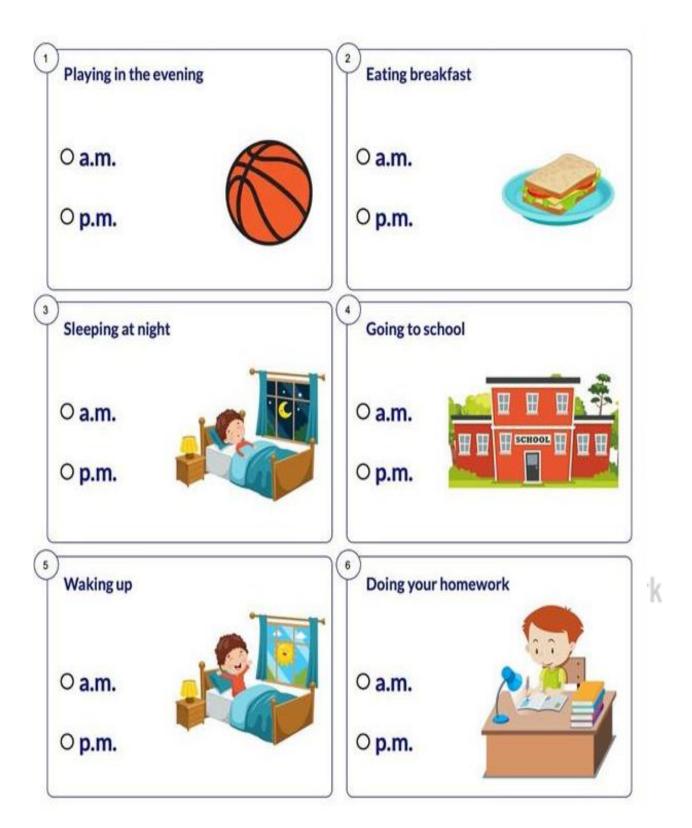
## Topic: Usage of a.m. and p.m. in Time



The meaning of a.m. is 'ante - meridiem', and p.m. is 'post- meridiem', which means before noon or midday. We associate p.m. with the afternoon and evening, and a.m. with morning and midnight.

Day: \_\_\_\_\_

• Tick the correct option according to activity.



Day: \_\_\_\_\_

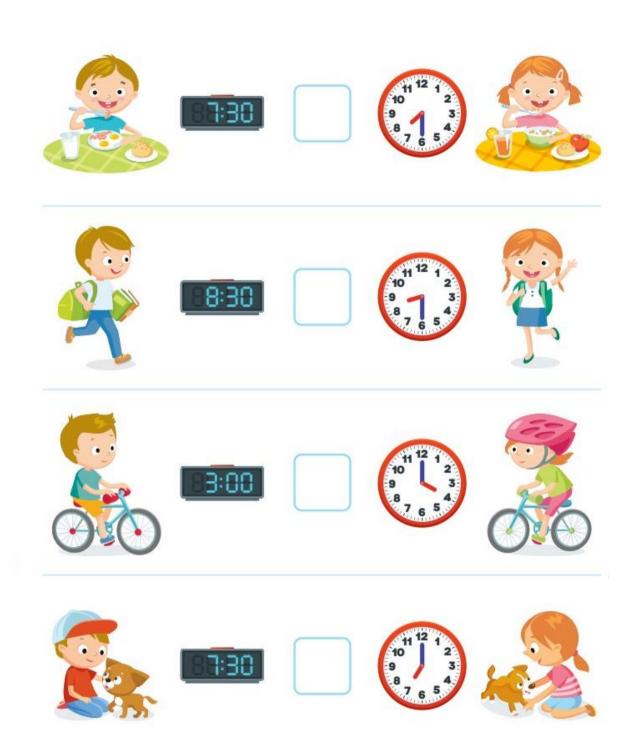
• Use a.m. or p.m.

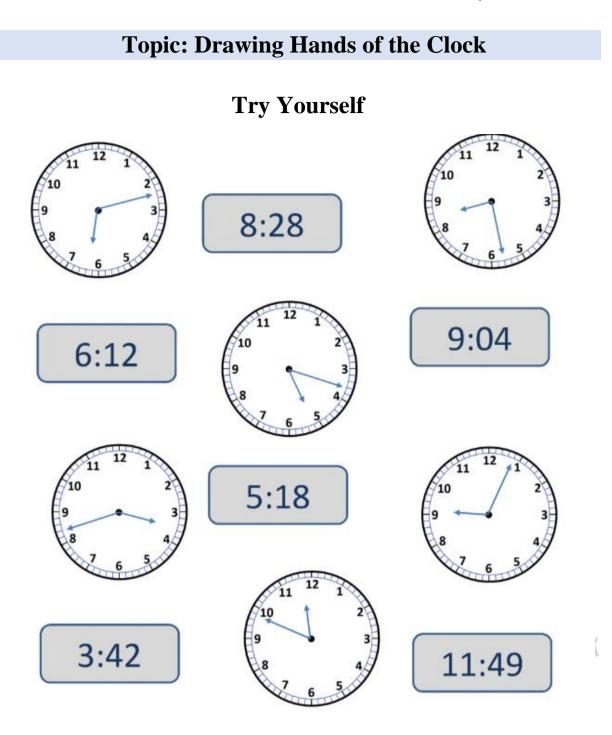


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Day: _____
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• Look at each picture and clock. Write time in a.m. and p.m.



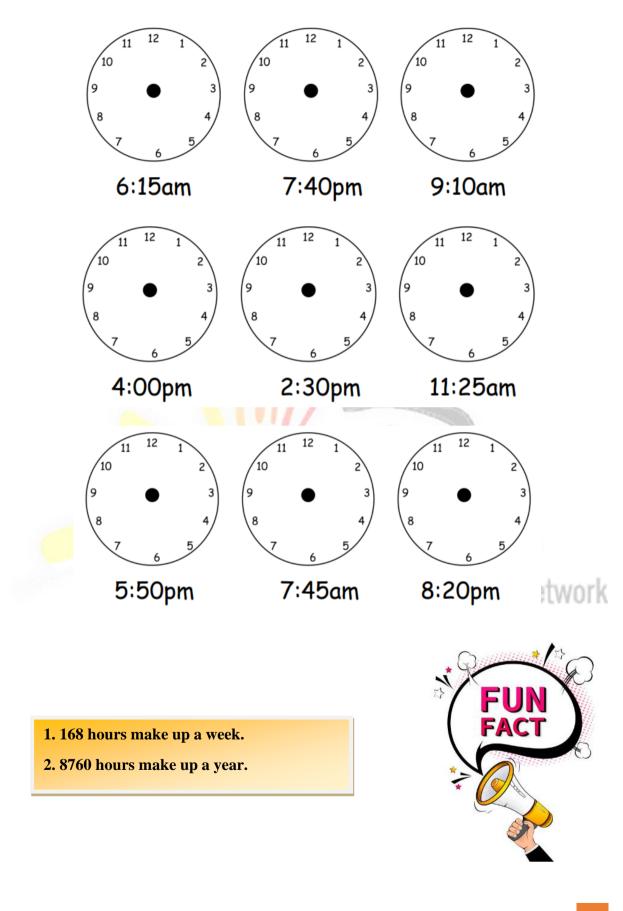


We do not write a.m. and p.m. with 12 o clock. We write it as 12:00 noon or 12:00 mid-night

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• Read the time and draw hands of the clock.



PROGRESSIVE EDUCATION NETWORK 93

## **Topic: Solar Calendar**

There are 365 or 366 days in a solar year. There are 12 months in the year. A calendar is the record of all months, dates and days of the year.

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PROGRESSIVE EDUCATION NETWORK 94

Date:	Day:
Let's Learn	
February April June 30 May January 31 31 31 July 31 31 31	September 30 August 31 December 31 0 0 0 0 0 0 0 0 0 0 0 0 0
Left Fist	Right Fist

We know, a week has 7 days. Now to find the number of weeks in a year we need to divide 365 by 7.

So,  $365 \div 7 = 52$  weeks and 1 day

We can learn from the calendar that:

7 days = 1 week

About 52 weeks = 1 year

12 months = 1 year





# **Interesting Facts!**

There are 365 days in a year. A year with 366 days is called a leap year. Every fourth year is a leap year. The extra day is added to February which then has 29 days.

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Day: \_\_\_



#### • Fill in the blanks:

- 1. There are ..... months in a year.
- 2. October months comes after .....
- 3. ..... shows the year, month and days.
- 4. A leap year has ..... days.

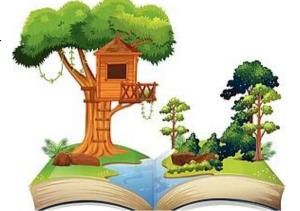
#### • Write T for true and F for false.

- 1. There are 31 days in September.
- 2. There are 52 weeks in a year.
- 3. Leap year comes after 4 years.
- 4. December is the first month of the year.
- Arrange the months of the year in correct order.

June, July, August, January, February, November, December, March, April, October, May, September.

#### • Match the following:

- (i) Day comes after Sunday
- (ii) Month having 28 or 29 days.
- (iii) Last month of the year.
- (iv) Third day of the week.

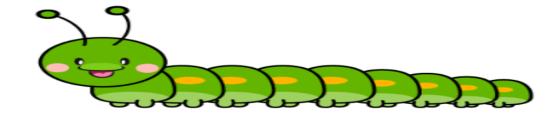


### Progressive Education Network Wednesday

. December

February

Monday



PROGRESSIVE EDUCATION NETWORK 96

## **Topic: Lunar Calendar**

A "lunar calendar" is a calendar based on the monthly cycles of the Moon's phases, in contrast to "solar calendars", whose annual cycles are based only directly on the solar/sun year. Lunar calendar is also known as Islamic or Hijiri Calendar.

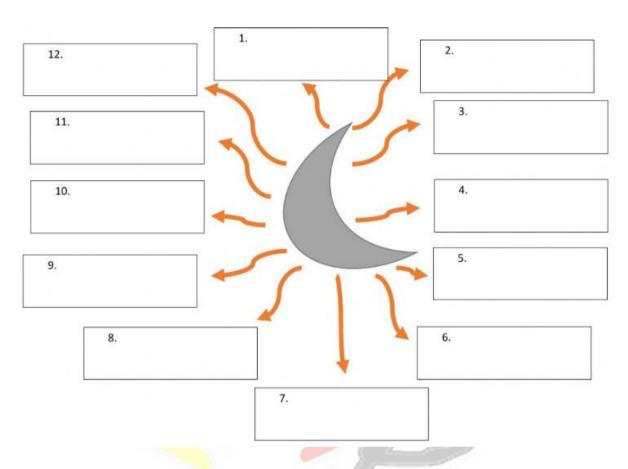
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السبت الأحد الأثنين الثلاثاء الأربعاء الخميس الجمعة	السبت الأحد الثنين الثلاثاء الأربعاء الخميس الجمعة	السبت الأحد الثثنين الثلاثاء الأربعاء الخميس الجمعة
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جمادي الأخرة 06 ديسمبر 2023- يناير 2024 م	جمادي الأولى 05 🛛 نوفمبر-ديسمبر 2023 م	ربيع الثاني 04 فتوبر-نوفمبر 2023 م
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رمضان 09 <sup>مارس-أ</sup> بريــــل <sup>2024 م</sup>	شعبان 08 ميراير-مارس 2024 م	رجب 0 <b>7</b> ينا <u>بر - مبراير 2024 م</u>
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السبت الأدد الثنين الثلاثاء الأربعاء الخميس الجمعة	السبت الأحد الأثنين الثلاثاء الأربعاء الخميس الجمعة	السبت الأحد الأثنين الثلاثاء الأربعاء الخميس الجمعة
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<b>5</b> 29 4 28 3 27 2 26 1 25 30 24 29 23	6 29 5 28 4 27 3 26 2 25 1 24	8 29 7 28 6 27 5 26 4 25
6 30		

Date:	Day:
Activity # 22	
• Tick the names of the Islamic Months.	
March Safar	July Zul-Hajjah
Rajab May	Ramadan August
Muharram Sha'ban	September Jammadi-ul-Sani
<ul> <li>Fill in the blanks.</li> <li>1. The Islamic calendar follows the changes of the</li> </ul>	
2is celebrated in the mo	onth of Shawwal.
3. In the Islamic calendar, the months may have	days.
4. Muslims fast in the month of	
5was born in the month	of Rabi-ul-Awwal.
6. Eid-Ul-Adha is celebrated in the month of	en
7. In which month do Muslims travel to perform Ha	sive Education Network
In the Islamic religion, the sacred months or in the Islamic Calendar (Zul al-Qadah, Zul-Hajja	
Allah mentioned the Holy Months in Surah Al	Tawwbah (Surah 9,Verse 36).
	9
<ul> <li>✓ Important Vocabula</li> <li>▷ p.m. and a.m.</li> <li>▷ Solar year</li> <li>▷ Lunar year</li> <li>▷ Calendar</li> </ul>	ıry
PROGR	ESSIVE EDUCATION NETWORK 98

Date:
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Day: \_\_\_\_\_

### • Write the months of the Lunar Calendar.



• Match the months in the solar calendar to the corresponding months in the Islamic calendar.



## Unit # 6: Geometry

Day: \_\_\_\_\_

#### **Learning Outcomes:**

After completing these activities, students will be able to:

- Identify the figures like square, rectangle, triangle, circle, semi-circle, and quarter-circle.
- Identify vertices and sides of a triangle, rectangle and square.
- Differentiate between a straight line and a curve.
- Identify straight lines and curves from the given drawings.
- Use ruler to draw a straight line of given length exclude fractional length.
- Make/complete geometrical patterns on square grid according to one or two of the following attributes. a) shape b) Size c) Orientation
- Recognize and name 3-D objects (cubes, cuboids, cylinder, cone, sphere).

## **Topic: Shapes**

### Let's Learn. We are shapes you can see us everywhere.



Hi! My name is Circle.

I go round and round. I roll on the ground; I can roll all over around.

I have no sides and no corners.

Hi! My name is Rectangle

I got really long square.

I have 4 sides with 2 opposite sides equal.



Hi! My name is Triangle.

I am a pointy little shape.

I have 3 equal sides.

Hi! My name is Square.

I have four sides and four corners, and they all are equal.

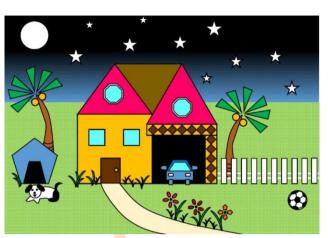
The smallest geometric shape is a point with no length, width, or height. However, it is used as the foundation for all other shapes. The largest regular polygon that can fit inside a circle is a hexagon. This means that a circle can be divided into six equal parts using only straight lines.



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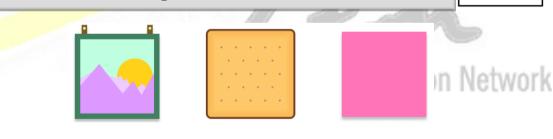


• Count and write number of shapes in the above picture.

 Square ----- Triangle ---- 

 Rectangle ----- Circle ----- 

A square is a regular polygon having four equal sides and equal angles that measure  $90^{\circ}$  each. A square is a two-dimensional closed shape with 4 equal sides and 4 vertices. Its opposite sides are parallel to each other. We can also think of a square as a rectangle with equal length and breadth. (look at the images below)





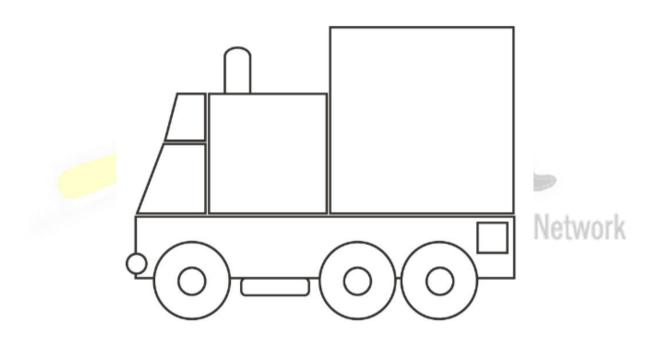
• Circle all the shapes square.



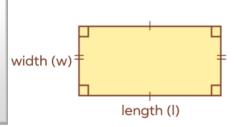
Date:		Day:

• How many squares you can find in this art work.

Colour the squares green.



A rectangle is a closed 2-D shape, having 4 sides, 4 corners, and 4 right angles (90°). The opposite sides of a rectangle are equal and parallel. Since a rectangle is a 2-D shape, it is characterized by two dimensions, length, and width. Length is the longer side of the rectangle and width is the shorter side.

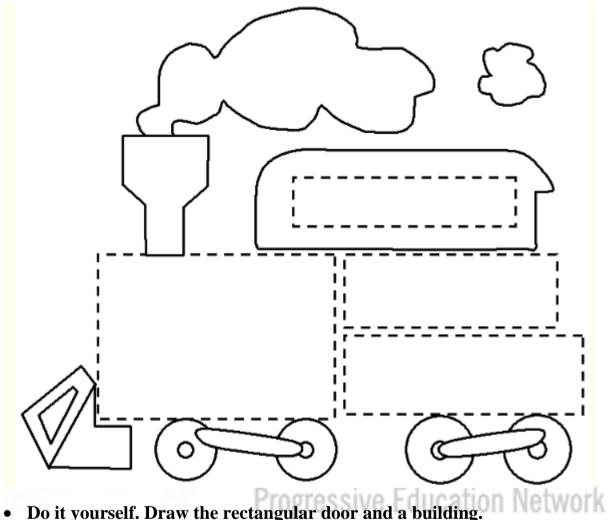


Date: \_\_\_\_\_

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Activity # 24

Trace all the Rectangles and Colour the picture. •



Do it yourself. Draw the rectangular door and a building. •

A triangle is a closed, <u>2-dimensional shape</u> with 3 sides, 3 angles, and 3 vertices. A triangle is also a <u>polygon</u>.

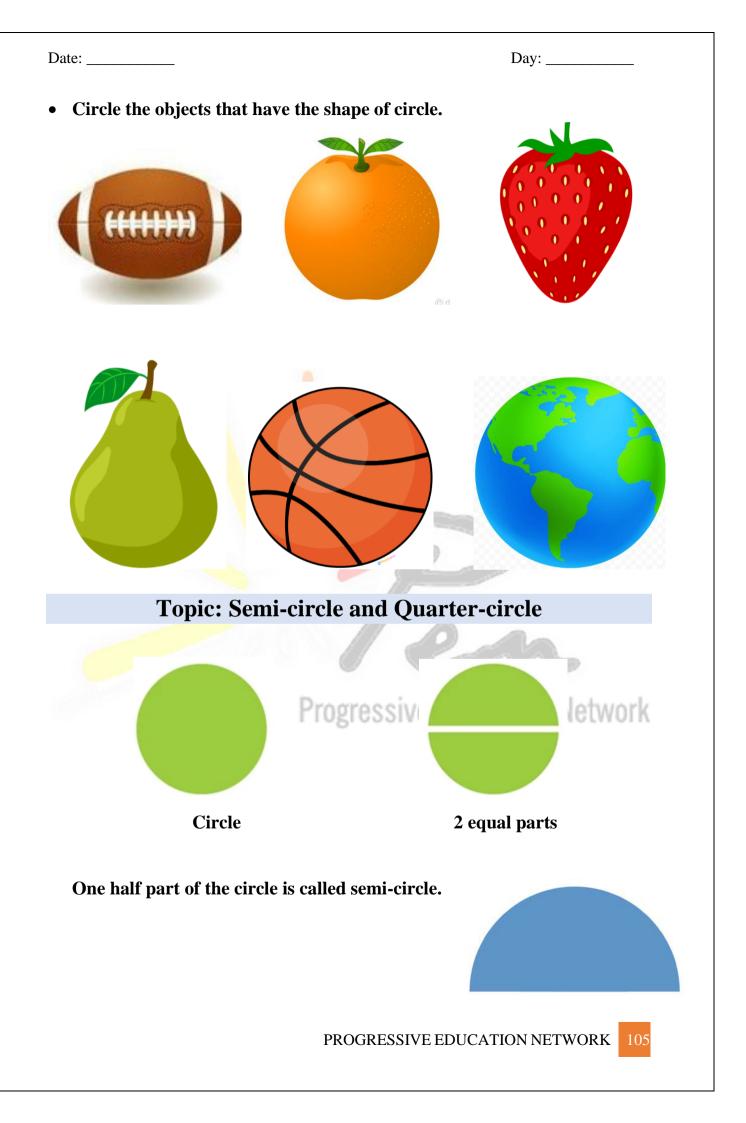
Some real-life examples of triangles include sandwiches, traffic signs, & cloth hangers.

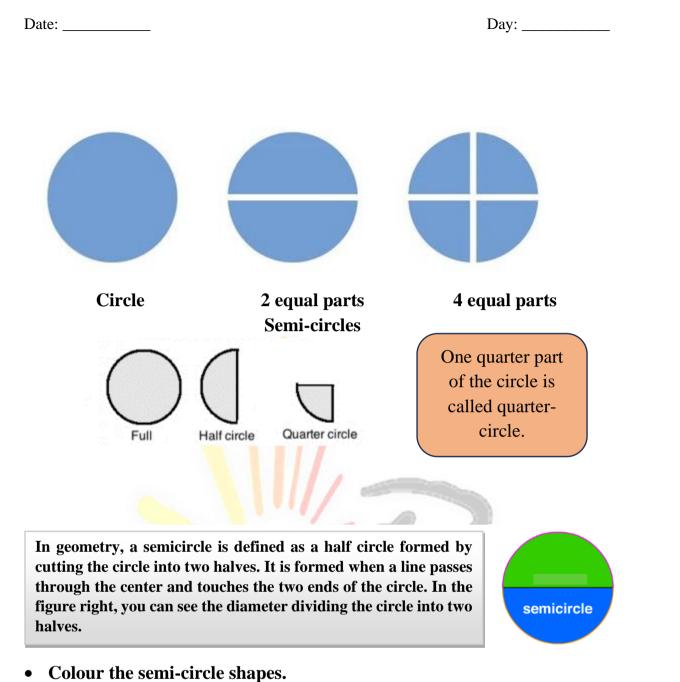


• Colour all the triangles.



• Make a house, which should have triangle roof and windows.



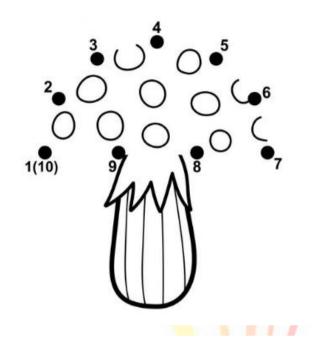




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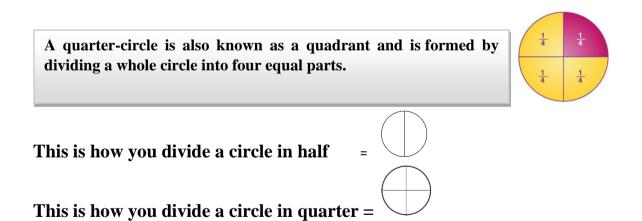
Date:

• Join the dots and name the shape.



Name of the shape: .....

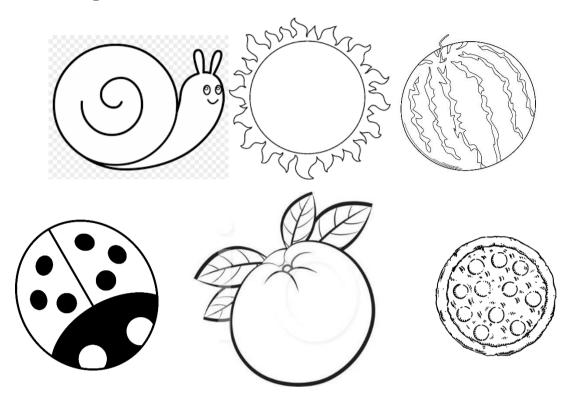
• Draw a semi-circle shape.



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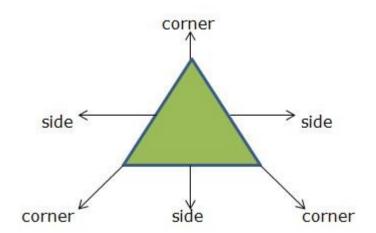
• Now it's your turn, each picture below has a circle in it, divide each circle in quarter.

Date:



## **Topic: Sides and Vertices of the Shapes**

Shapes are made of lines called sides. A vertex is the place where two sides meet, like a corner. Tip: When there is more than one vertex, we say "vertices." Different shapes have different numbers of sides and vertices.



Date: \_\_\_\_\_ Day: \_\_\_\_\_

## Activity # 26

## **Complete the following:**

Shape	Name	How many sides?	How many corners?
$\triangle$			
$\bigcirc$			

## **Topic: Straight and Curved Lines**

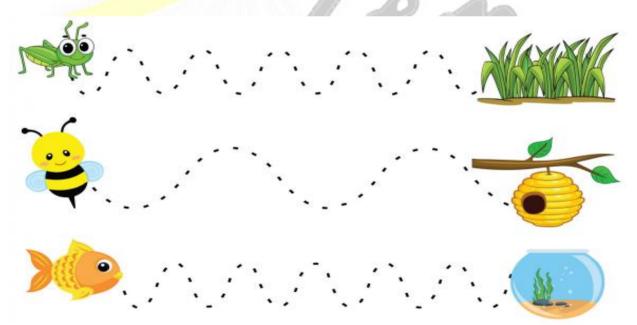
A straight line is an endless one-dimensional figure that has no width. It is a combination of endless points joined on both sides of a point. A line that is not curved or bent.

• Practice the straight line.



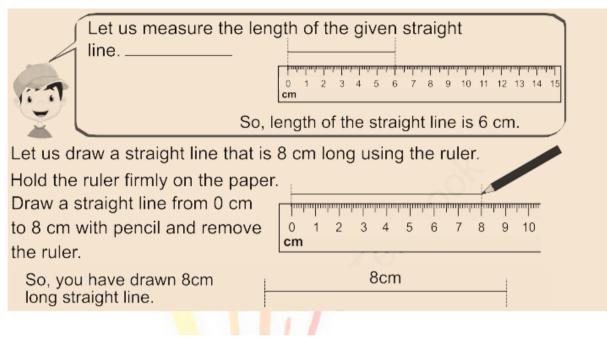
A curved line, as the name suggests, is a line that is bent. We see curved objects all around us. Curved lines are also known as bent lines. It is continuous and smooth, without any sharp turns.

• Trace the curve lines.



## **Topic: Drawing Straight Line**

Day:



• Use the ruler, to measure the following objects and write its lengths.

••••••

• Draw the straight lines for the 4cm and 10cm lengths using ruler.

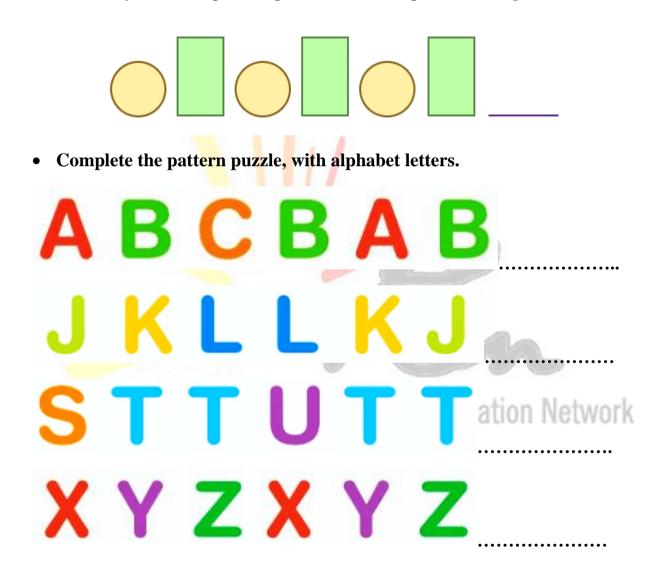
4cm			
10cm			

Day: \_\_\_\_\_

## **Topic: Patterns**

A pattern is defined as a sequence of repeating objects, alphabets, shapes or numbers. We can relate a pattern to any type of event or object. A pattern has a rule that tells us which objects belong to the pattern and which objects do not belong to the pattern.

Look at the image below, the pattern of shapes, circle and rectangle, you can see the blank is intentionally left, to complete the pattern the next shape after rectangle will be circle.



Day: \_\_\_\_\_

## Activity # 27

• Draw the pattern, follow the given statement.

Straight line, curve line, curve line, straight line

Circle, Square, Circle, Square, Circle

### **Important Vocabulary**

- > Semi-circle
- > Quarter-circle
- Straight line
- Curved line
- ≻ Ruler
- > Patterns
- > Grid
- > 3-D Shapes
- > Cube
- Cuboid
- > Cylinder
- > Sphere
- > Cone

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## **Topic: 3-D Shapes**

A three - dimensional shape can be defined as a solid figure or an object or shape that has three-dimensions-length, width, and height. Unlike two dimensional shapes, threedimensional shapes have height, which is the same as thickness or depth. Three dimensional is also written as 3D.

A Cube is a solid three-dimensional figure, which has 6 square faces, 8 vertices and 12 edges. It is also said to be a regular hexahedron. You must have seen 3 × 3 Rubik's cube, which is the most common example in the real-life and it is helpful to enhance brain power.

A cuboid is a solid shape or a three-dimensional shape. A convex polyhedron that is bounded by six rectangular faces with eight vertices and twelve edges is called a cuboid. A cuboid is also called a rectangular prism. A cuboid with six square faces is called a cube. An example of a cuboid in real life is a rectangular box.

A sphere is a three-dimensional object that is round in shape. The sphere is defined in three axes, i.e., x-axis, y-axis and z-axis. This is the main difference between circle and sphere. A sphere does not have any edges or vertices.

A cone is a three-dimensional shape in geometry that narrows smoothly from a flat base (usually circular base) to a point (which forms an axis to the center of base) called the apex or vertex. We can also define the cone as a pyramid which has a circular crosssection, unlike pyramid which has a triangular cross-section.

Cylinder is one of the basic 3d shapes, in geometry, which has two parallel circular bases at a distance. The two circular bases are joined by a curved surface, at a fixed distance from the center. LPG gas-cylinder is one of the real-life examples of cylinders.





Day: \_



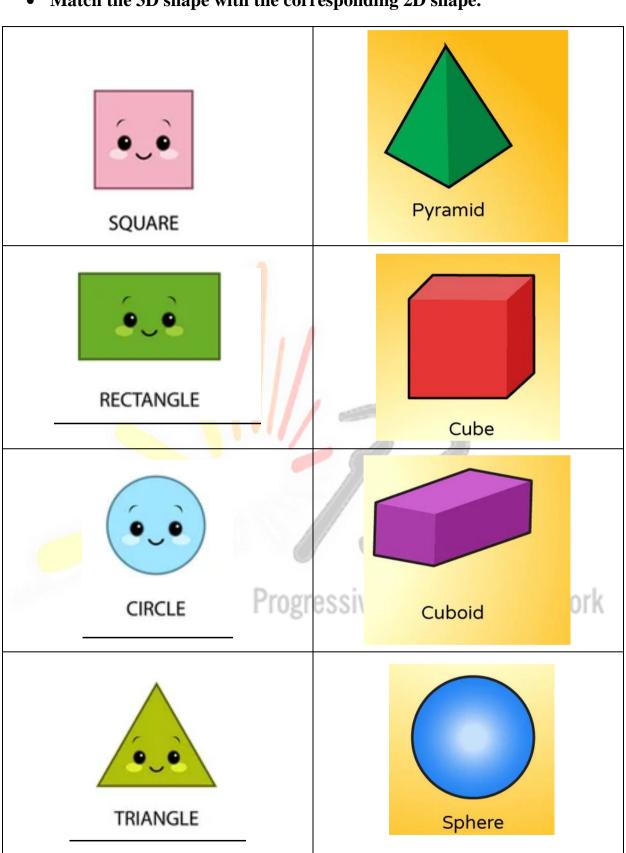


## Activity # 28

• Circle the name of shape which best matches the real-life objects.

Cone/Cube/Cyli <mark>nd</mark> er	Con <mark>e/</mark> Sphere/Cylinder	Cylinder/Cone/Cube
Cone/Cube/Cylinder	Sphere/Cube/Cylinder	<b>Cone/Sphere/Cylinder</b>
	E	
Cone/Sphere/Cylinder	Cone/Cube/Cylinder	Sphere/Cone/Cube

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Day: _____
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• Match the 3D shape with the corresponding 2D shape.

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