Numeracy
For 6 to 7 year olds
Screen-free learning resources that build multiple skills.
Check if this Workbook is right for you.

Answer the following questions in 20 minutes.

1. Write the number using words:
   2 _________ 9 _________ 8 ____________

2. Write the total number of items:
   ![Images of objects]

3. Write the missing numbers:
   40, ____ , _____, 37, 36, ____, 34, 33, ______, 31

4. 8 + 2 = ________ 7 - 3 = __________

5. Arrange the numbers from biggest to smallest: 16, 20, 29, 3

6. What comes next in the following patterns?
   A A B A A B ________ ________ ________
   ![Images of shapes]
   _______ _______ _______
   1 2 5 1 2 5 _______ _______ _______

7. Draw three objects at home or that you have seen which have the following shapes: rectangle, circle, and triangle.

Check your answers using the key on the next page.
Answer Key

Give the allotted marks for each correct answer.

1. 2 _________ 9 _________ 8 _________ 1 mark each
   
2. 
   🍀🍀🍀🍀 + 🍀🍀🍀 = 5
   🎆🎆🎆🎆 + 🎆🎆🎆 = 9 1 mark each

3. 40, ___, ___ , 37, 36, ___ , 34, 33, ___ , 31 1 mark each

4. 8 + 2 = _____ 7 - 3 = _____ 1 mark each

5. 29, 20, 16, 3 1 mark

6. A A B A A B ___ ___ ___
   1 2 5 1 2 5 1 2 5 1 mark each

7. Rectangle Circle Triangle (Accept any appropriate response.)

If your score is:

<table>
<thead>
<tr>
<th>Score</th>
<th>Workbook</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 or less</td>
<td>Use the Numeracy Workbook for Level 0</td>
</tr>
<tr>
<td>10 to 16</td>
<td>This workbook is right for you!</td>
</tr>
<tr>
<td>17 to 20</td>
<td>Use the Numeracy Workbook for Level 2</td>
</tr>
</tbody>
</table>
My Learning Journey

Name: ______________________

Draw yourself here.

Week 1

Day 1  Day 2  Day 3  Day 4  Day 5

DONE!

Week 2

Day 1  Day 2  Day 3  Day 4  Day 5

DONE!

Week 3

Day 1  Day 2  Day 3  Day 4  Day 5

DONE!

Week 4

Day 1  Day 2  Day 3  Day 4  Day 5

WOW

If you liked this, go to our IFERB website for hundreds of more such resources. Visit https://resources.educationaboveall.org
Draw how you feel **everyday** in your notebook.

Today, I feel **Happy**

- **Sad**
- **Confused**
- **Angry**
- **Scared**
Week 1 Overview

Project

Number Bonds
Explore how numbers can be used to create other numbers.

Adding Machine
Explore number bonds by making your own adding machine.

Grouping Game
Practise number bonds through a game.

Domino Count
Count the dots on dominos and make number bonds.

Let's Make 10!
Practise 10’s number bonds though a game.

My Friend
Explore the bond you share with your friend.

Materials Needed
• Paper
• Pencil
• Counters (leaves, stones, rice, etc.)
• Tape/glue
Day 1  Project-Based Learning

Number Bonds

Can you use numbers to create other numbers?

Locate 6 items that are a part of a whole. (Eg: leaves are a part of a plant, sleeves are a part of a t-shirt, etc.).

Are numbers part of a whole too? Let’s find out!

Collect 4 counters (stones, beads, etc.) and choose 2 people.

How can you split the counters between them?

<table>
<thead>
<tr>
<th>I had</th>
<th>I gave _______ (Eg: my brother)</th>
<th>I gave _______ (Eg: my sister)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 counters</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>4 counters</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4 counters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 counters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 counters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4 is a whole number and the numbers 1, 2, and 3 are parts of it. So, the number bonds for 4 are:

Repeat the activity with 3 counters and 5 counters. Draw the number bonds.
Grouping Game

How to Play

• Players form a circle and begin walking and clapping.
• The narrator will say a number from 1 to 5. Players quickly get into groups of that number.
• The players who are not in a group are out.
• Draw the number bonds you observe.

Make groups of 3!

(Total no. players in the game)

The last pair of players are the winners!
In how many ways can you split 6 counters between 2 people?

<table>
<thead>
<tr>
<th>I had</th>
<th>I gave _____</th>
<th>I gave ______</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 counters</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>6 counters</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>6 counters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 counters</td>
<td></td>
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<td>6 counters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 counters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 counters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When is the division fair (split equally)? When is it unfair?

Fill in the number bonds for 6.

Repeat the activity with 7 counters and draw the number bonds.
My Friend

Just like numbers have bonds, we bond with people too. They are our friends or family.

Think of one person you bond well with. Fill the table:

My name: ______________

What I am good at: ______________

What I like to eat: ______________

What I like about my friend: ______________

My friend’s name: ______________

What my friend is good at: ______________

What my friend likes to eat: ______________

What my friend likes about me: ______________

- Is your friend just like you or very different from you?
- What are some things that are nice to have in common with our friends?
- Can we be different from each other and still be friends?
Explore the different ways in which 8 counters can be split between 2 people. Complete the number bonds below.

\[
\begin{align*}
8 & \quad 0 \\
8 & \quad 7 \\
6 & \quad 8 \\
5 & \quad 8 \\
4 & \quad 8 \\
3 & \quad 8 \\
2 & \quad 8 \\
1 & \quad 8 \\
\end{align*}
\]

Are there more fair ways to split the number between more people?

Repeat the activity with 9 counters and draw the number bonds.

Let's Revise!

Count the items and note down all the different number bonds you can create:

\[
\begin{align*}
7 & \quad \boxed{+} \\
9 & \quad \boxed{+} \\
\end{align*}
\]
Day 3 Activity

Adding Machine

- Fold two pieces of paper to create 2 cylindrical tubes.
- Stick them on the wall in a V-shape.
- Below the two tubes, place a bucket or container.

Pass some counters through the tubes and note down the final number you see. Write out the number bonds.

Example

1 counter 2 counters

1 + 2 = 3

Create 6 different number bonds using your Adding Machine.
Explore the different ways in which 10 counters can be split between 2 people. Complete the number bonds below.

Let’s Revise! Count the items and fill the number bonds.
Let's Make 10!

Game Set-Up
Each team should have:
Number cards (1 to 9) OR Counters (from 1 to 9)

How to Play
• Create 2 teams. Split the number cards/counters among team members.
• All players should stand 10 to 15 steps from the narrator.
• The narrator will say a number from 1 to 9 out loud.
• The player who has the card to make the number 10 with the called-out number runs to the person.
• The player who reaches first to make the number bond earns 1 point for the team.
Day 5  Project-Based Learning

Number Bonds

Activity Set-Up

With an adult’s help, make a die.

• Draw and cut the picture.
• Fold along the lines and stick together to form a cube.

On paper (or the ground), draw this shape. Add a ‘+’ sign as shown.
• Keep 10 counters/small stones ready.

Activity Time!

• Roll the die. Place that many counters in the first section.
• Roll the dice again. Place that many counters in the second section.
• Add the counters in the third section.
• Draw the number bond.

Create 6 such number bonds.

• Can you use numbers to create other numbers?
• Where are number bonds used in daily life?
Count the dots on each domino. Write it and add them.
Weekly Reflection

Did I enjoy learning this week?

What are some new things I learned?

What did I do well?

What can I do better next week?

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Week 2 Overview

Project

My Place Value Machine

Explore the place values of numbers.

[Diagram of a project]

Many Forms

Explore different ways to show a number through this game.

Math Signs

Challenge your peers and practise place values!

Garden of Leaves

Count and observe the beauty of leaves around you.

Number Names

Practise writing number names from 11 to 15.

Number Names

Practise writing number names from 16 to 20.

Materials Needed

- Paper
- Pencil
- Thread
- Glue / Tape and Scissors
- Counters (beads/ small stones, etc.)
- Dice
- Think Sticks

[Image of materials needed]
**Day 1 Project-Based Learning**

**My Place Value Machine**

What other numbers make up a given number?

Collect 15 small objects to count. (*stones, beads, leaves, etc.*)

Explore the number bonds using the counters:

- 10
- 11
- 12
- 13
- 14
- 15

Identify the place value of the digits from 10 to 20.

Place Value

- Tens
- Ones

Shows us how many tens the number has.
Number Names (10 to 15)

Say and trace the number names:

10  ten          ten

11  eleven       eleven

12  twelve       twelve

13  thirteen     thirteen

14  fourteen     fourteen

15  fifteen      fifteen
Day 2  Project-Based Learning

My Place Value Machine

- Put 10 beads or paper balls through a thread.
- Knot it up on either side of the thread to make them stay in place.
- Make 4 such threads.

<table>
<thead>
<tr>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On paper or the ground, make 2 sections - ‘Tens’ and ‘Ones’.

Represent the numbers 10 to 20 in your place value machine.

Using the machine, explore the numbers 20 to 25:

<table>
<thead>
<tr>
<th>Whole Number</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>2 ((10 + 10))</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where can you find these numbers around you?
Day 2 Worksheet

Number Names (16 to 20)

Say and trace the number names.

16 sixteen sixteen
17 seventeen seventeen
18 eighteen eighteen
19 nineteen nineteen
20 twenty twenty

Can you write the missing numbers?

11 □ 13 □ 15 □ 17
Day 3

Project-Based Learning

My Place Value Machine

Represent the numbers 26 to 30 in your place value machine.

<table>
<thead>
<tr>
<th>Whole Number</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Backward Counting Game

- Write the numbers 0 to 30 in a line on the floor.
- Each player should start at ‘30’ and have 1 counter.
- Each player rolls the die and moves backwards that many steps. Say the numbers out loud as you cross them to get to the right number.
- The player that reaches 0 first, wins the game.
Day 3 Mindfulness

Garden of Leaves

Go for walk outside and look around. Do you see any trees or plants? Look at their leaves.

What colour are they? Are they big or small? Notice how different they are from each other.

If you see any fallen leaves, pick them up and place them in a circle.

Otherwise, you can draw the different types of leaves you see. Do not pluck out leaves from plants.

How many leaves did you collect/draw?

Each plant and tree is different from the other. Yet they live close to each other.

Can you think of how this is similar to your friends/family?
Day 4  
Project-Based Learning

My Place Value Machine

Collect thin sticks so they are easy to break into different sizes. Use those sticks to form the numbers 30-40. You can also use paper strips to create these numbers.

Represent the numbers 31 to 40 in your place value machine.

Let’s Revise!  
Count and write.

![Diagram showing place value blocks for numbers 23, 34, 40, 31, 32, 33, 35, 36, 37, 38, 39]
Math Signs

How to Play

Players will show the **tens** place like this:

Players will show the **ones** place on their fingers:

- Team 1 will create a number using the symbols.
- Team 2 will say the number and will earn a point if correct.
- The team with the most points wins.

**Example**

Team 1

Team 2 **26!**
Day 5 | Project Based Learning

My Place Value Machine

Numbers can be represented in different ways.

<table>
<thead>
<tr>
<th>Words</th>
<th>Twenty-Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Form</td>
<td>25</td>
</tr>
<tr>
<td>Expanded Form</td>
<td>20 + 5</td>
</tr>
<tr>
<td>Place Value</td>
<td>2 Tens, 5 Ones</td>
</tr>
</tbody>
</table>

Choose any 5 numbers from 10 to 40 and show them creatively. Share it with your friends and family.

Examples
Many Forms

How to Play

• Each player says a number from 1 to 40 and rolls the die.
• Everyone writes the number based on the die:
  - Expanded Form
  - Words
  - Standard form
  - Picture
  - Place Value
  - Expanded form

• The first player to do it correctly, earns a point. The player with the most points wins.

The die shows 6. So, we should show 15 in **expanded form**.

\[ 15 = 10 + 5 \]
Weekly Reflection

Did I enjoy learning this week?

What are some new things I learned?

What did I do well?

What can I do better next week?

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Week 3 Overview

Beauty in Shapes
Explore shapes and measurements.

Project

What Shape Are You?
Create shapes using your body!

Sunny Side
Think and draw what makes you happy!

Story Time
Read about The Shape Family.

Story of a Circle
Bring a circle to life!

Measurements
Measure objects using digits, handspans and footspans.

Materials Needed
- Paper
- Pencil
- Colours
- Chalk
What is the difference between 2D and 3D Shapes?

**2D Shapes**
- Rectangle
- Square
- Circle
- Triangle
- Oval

**3D Shapes**
- Cuboid
- Cube
- Sphere
- Cone
- Cylinder

Draw 2 objects at home that look like each shape.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Object 1</th>
<th>Object 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle</td>
<td>Plate</td>
<td>Clock</td>
</tr>
</tbody>
</table>
What Shape Are You?

How to Play

• Whisper one of the shapes to a player.

• Player 1 acts out the shape. Others have to guess the shape.

• If the shape is guessed correctly, they earn a point.

The team with the most points wins the game!
**Beauty in Shapes**

Which shapes do you see in this drawing?

**Drawing Activity**

- Choose a place or scene that you want to draw.

- Make a list of the people, objects or animals you want to include in your drawing.

- Draw any 2 of those using shapes.
Day 2

Activity

Measurements

In the olden days, people measured using their bodies. Let’s learn 4 ways:

- Explore the relationship between the measurements. *(Eg: 1 handspan equals how many digits?)*
- How many digits is the length of your drawing sheet?

Can you think of other body parts you can use to measure things?

Draw the outline of your or your body.

Measure the following using footspans and cubit:

- Hand Length
- Leg Length
- Full Body Length
Day 3 Project-Based Learning

Beauty in Shapes

Try drawing these animals using shapes.

Drawing Activity

• Include any animal in your drawing using any shape.
• Why did you choose that animal?
• Explore 3 fun facts about the animal.
Day 3  Mindfulness

Sunny Side

- Take 3 deep breaths.
- Close your eyes. Say all the things that make you **happy**.

Draw what comes to your mind in the sun below.
Day 4

Project-Based Learning

Beauty in Shapes

Let's Revise!

Complete your drawing by adding more details to it.

Some objects have 2 or more shapes put together. Choose any 3 objects at home and draw the shapes it is made of.

How many of each piece should Rita buy to make this butterfly?

- Triangles
- Rectangles
- Hearts
- Circles
- Ovals
This is your pet circle. How will he introduce himself?

He loves to bounce! Every time he does, he changes his **shape**, **colour**, and **emotion**! Draw it out:

He goes to a park to play. He becomes a ball. He becomes a merry-go-round. **What else can he become in the park?** Draw it!

It is time for him to take his family to a shop. He calls 3 of his circle friends and they become **wheels**. Can you draw the vehicle?

The family prepares lunch. Circle wants to help too. He becomes different **circular food** items. Draw 3 of them below:

**Aren’t circles so useful?**
Day 5

Project-Based Learning

Beauty in Shapes

Presenting Your Drawing

- Show your final drawing to your family and friends.
- Explain the shapes you used in the drawing.
- Discuss with your family and add another shape to your drawing.

How many of each shape can you see in your drawing?

____  ____  ____  ____

Draw a star for yourself for completing your drawing!

1 2 3 4

- List the shapes you learnt in this project. What does each shape remind you of?
- Which is your favourite shape? Imagine you are that shape and write/draw a story about its life!
Who Will Win?

This is the Shapes Family. In their town, there is a Lantern Competition.

The Shapes are getting ready for it. Circle and his sister Triangle got to work.

Circle made a lantern with circles.

Triangle made one with triangles.
Mr. Square and Mrs. Rectangle said, “Isn’t it boring to use the same shapes all the time?”

“Let us try something new!” said Circle.

Together, they made a lantern with circles and triangles.

Mr. Square loved the new lanterns. Who do you think won the competition?

• What is the character and setting of the story.
• Draw your own lantern using shapes.
Weekly Reflection

Did I enjoy learning this week?

What are some new things I learned?

What did I do well?

What can I do better next week?

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Week 4 Overview

**Patterns Everywhere**

- Explore patterns around you.

**Project**

1. **My Habits**
   - Observe patterns in your daily actions and behaviour.

2. **Complete the Pattern**
   - Observe and continue different patterns.

3. **Free Flow**
   - Create shapes and patterns with your hands.

4. **Shape Patterns**
   - Explore patterns with different shapes.

5. **Story Time**
   - Explore patterns with Paul, the Pattern Detective.

**Materials Needed**

- Paper
- Pencil
How can patterns help us understand the world?

Patterns are things, numbers, or shapes that repeat.

Circle what will come next in these patterns.

Draw 3 other patterns you see around you.

Patterns Around Us 🌞 🌙 🌞 🌙

Days and nights repeat and happen regularly as a pattern. Observe the sky. Do you see patterns in the clouds? What are some other patterns you see around you?
**My Habits**

Let us observe patterns in our daily actions. Fill the table below. (Add your own questions too.)

<table>
<thead>
<tr>
<th>Question</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did I wake up early?</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Did I get angry?</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

Continue tracking your habits over the next 2 weeks.

After each week, list 2 observations this way:

“When I ________, then ________ happened.”

(Example: “When I didn’t sleep well, then I woke up irritated.”)

Are there “good” or “bad” habits?
Patterns in Nature

Name and match the animal with the pattern on their skin.

Find 3 patterns in nature and draw them.

Patterns in our Clothes

Observe the shapes and designs that repeat in your clothes or other objects at home. Draw at least three such patterns in the boxes below.
Circle the repeating item and continue the pattern 2 more times. One has been done for you.
Patterns in Music

Which is your favourite song? Sing it out loud!
Can you identify a pattern in it?

Let’s make music based on the code!

Snap your fingers.
Clap your hands.
Stomp your feet.
Tap your thighs.

Try these patterns!

Create your own code and music pattern.
Day 3  Mindfulness

Free Flow

Scribble freely inside these boxes.

with your left hand

with your right hand

Do you observe any pattern?
Day 4  Project-Based Learning

Patterns Everywhere

Make a pattern with any 3 items in your home.

Example:

What comes next in these letter patterns?

A B A B A B  ______, ______, ______, _______
K L L K L L  ______, ______, _______
P P Q P P Q  ______, ______, _______

What comes next in these number patterns?

1 0 1 0 1 0 1 1 ______, ______, ______, _______
2 3 5 2 3 5  ______, ______, ______, _______
5 5 9 2 5 5 9 2  ______, ______, ______, _______

Make your own number, letter, and shapes patterns. Challenge your family or friends to complete it!
Shape Patterns

Draw the missing shapes in the following patterns

Create a pattern using 2 shapes.
Day 5  
Project-Based Learning

Patterns Everywhere

Exercise Patterns

Give a number code to 5 different body movements. Example:

\[ \begin{array}{ccccc}
1 & 2 & 3 & 4 & 5 \\
\end{array} \]

- Jumping+Jack
- Kangaroo+Jump
- Kick
- Kneel
- Bend

Make 3 of your own exercise patterns! Example:

- Repeat each pattern 4 times.

\[ \begin{array}{ccccccc}
4 & 5 & 4 & 5 & \ldots \\
3 & 3 & 2 & 3 & 3 & 2 & \ldots \\
1 & 2 & 4 & 1 & 2 & 4 & \ldots \\
\end{array} \]

Teach the exercise patterns to your friends and family!

Dance Pattern

Select a song to dance to. Create a code for different steps and make your own pattern. Teach the dance to your family!

- Did they enjoy the exercise and dance?
- Were they able to follow the pattern?
- Are patterns important in our lives? Why or why not?
Paul loves searching for patterns. “I am going to be a pattern detective today! Let’s find patterns!” said Paul.

Paul found a pattern hanging on the tree. It is called a hive and bees live in it. It is made up of many hexagons stuck to each other. A hexagon is a shape with 6 sides.

Before going inside the house, he notices that the bricks of house make a pattern.

The bricks are brown, and in the shape of a __________. It has __________ sides.
Inside the house, Paul saw a pattern on the carpet.
The carpet’s colour is blue.

He went to the kitchen and saw a pattern on the table.
“What is this fruit?” Paul asked his Mom. “It is a ______,” she said. “It is ______ in colour.”

The next day at school, he told his friends all about the patterns he found.

“Join me today! Let’s all be pattern detectives!” said Paul.

• Where did Paul see patterns?
• Where do you see patterns around you?
• Draw your favourite pattern.
Weekly Reflection

Did I enjoy learning this week?

What are some new things I learned?

What did I do well?

What can I do better next week?

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CERTIFICATE OF COMPLETION

This certificate is awarded to

for the successful completion of the Numeracy workbook.

Facilitator
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Pg. 9, 23, 35, 48: These activities were designed by Dream A Dream, India.

Pg. 52, 53: Pranav, The Pattern Detective (English), Written by Aditya Swaminathan Illustrated by Jemma Jose, Re-levelled and re-named by EAA, published by Pratham Books (© Pratham Books, 2006) under a CC BY 4.0 license on StoryWeaver.