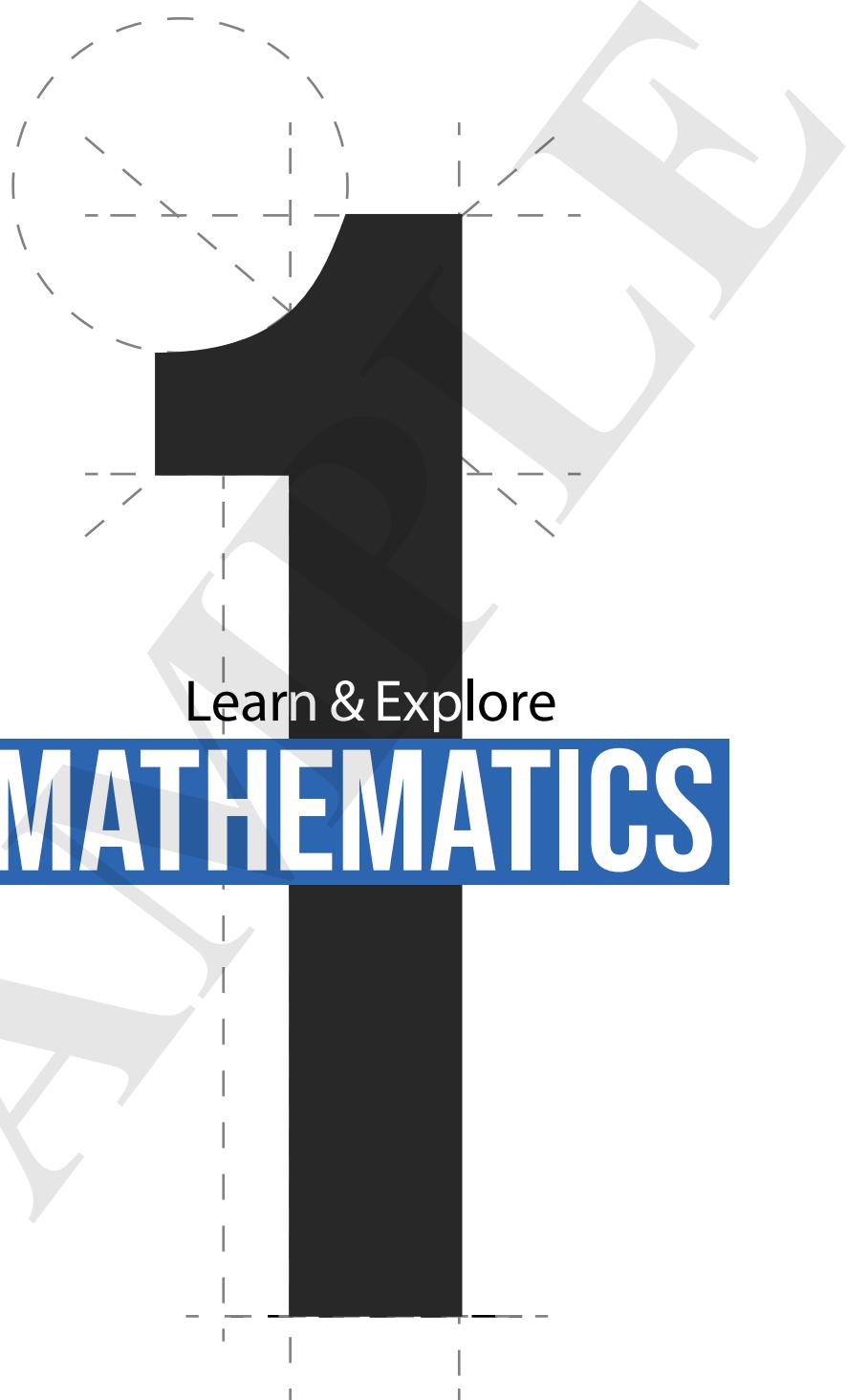




Learn & Explore

MATHEMATICS

SAY





Benchmarks

Grade 1-2-3

Numbers, Data & Measurements

[Number] Students will be able to demonstrate knowledge of place value (up to 4 digit numbers); represent whole numbers with words, diagrams, number lines, or symbols; order and compare numbers.

They will add and subtract numbers up to 4-digit numbers; multiply (up to 3-digit numbers with 1-digit) and divide (3-digit by 1-digit number). Solve problems involving odd and even numbers, addition, subtraction, multiplication and division of numbers (involving missing numbers, money, quantities and measures), round numbers to nearest tens, hundreds and thousands and make estimates.

[Measurements] Students will be able to measure, compare and order mass (kilograms/ grams/milligrams)

They would also solve problems involving weight/mass, and time (including addition and subtraction).

Read, write and compare time (hours and minutes)

[Data & Stat] Read and interpret data from pictographs, bar graphs, tally charts, block graphs and Carroll diagrams.

Organize and represent data using pictographs, bar graphs, tally charts, block graphs and Carroll diagrams to answer questions.

Describe the probability of an event.

Fractions

Recognize fractions as parts of wholes or collections; represent fractions using words, numbers, equivalent fractions in simplest form; compare and order simple fractions; add and subtract simple like and unlike fractions, including those set in problem situations. Demonstrate knowledge of decimal place value to the tenth.

Geometry

[Geometry] Students will be able to use properties to describe and compare three dimensional shapes (cube, cuboid, cone, cylinder, sphere, prism and pyramids) and relate those with two dimensional shapes; differentiate and classify polygons.

Identify parallel and perpendicular lines; reflective symmetry, right angles and angles smaller and larger than a right angle; positions, directions and movements, centre, radius, and diameter of a circle.

[Measurements] Students will be able to measure, compare and order lengths (Kilometers/meters/ centimeters), capacity (liters/ milliliters)

They would also solve problems involving length and capacity (including addition and subtraction).

Measure area and perimeter using square grids.

Algebra

Students will be able to analyze and complete geometrical and number patterns; find the missing number or operation in a number sentence.

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ALLOW - X :
THINKING TO
HAPPEN % <

Unit: 1

Introduction to Numbers and Comparisons

Learning Objectives:

- Count objects up to 10 and represent in numbers
- Counting objects in a set up to 10
- Match objects having one to one correspondence
- Compare two or more groups of objects in terms of numbers.
- Identify the number of objects in two groups to show “more than” and “less than”.
- Height vocabulary
- Comparing heights
- Mass vocabulary
- Comparing masses

Vocabulary:

More than Less than Light Lesser Tall
Short Heavier



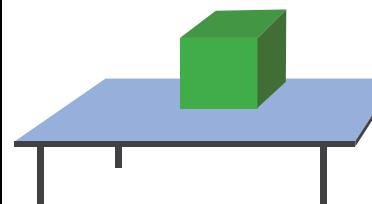


Size and Quantity

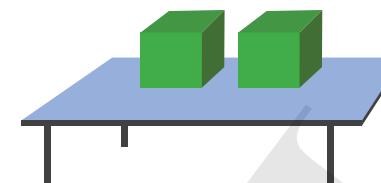


One-more activity

How many?



Add one more.



Now how many? Two

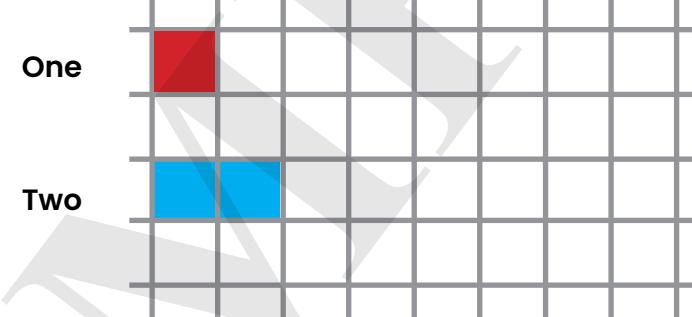
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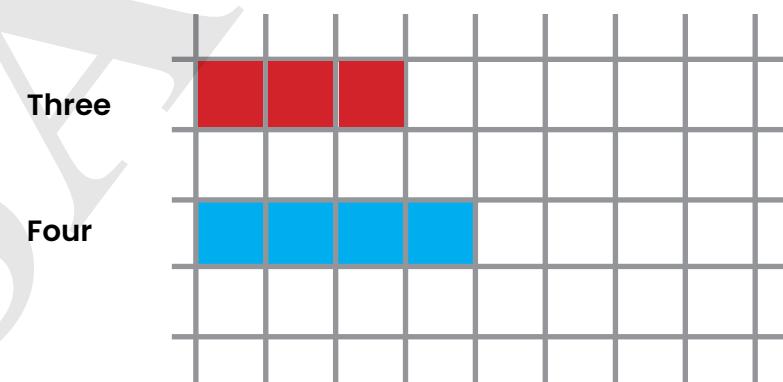
Do it till ten



Repeat on Abacus



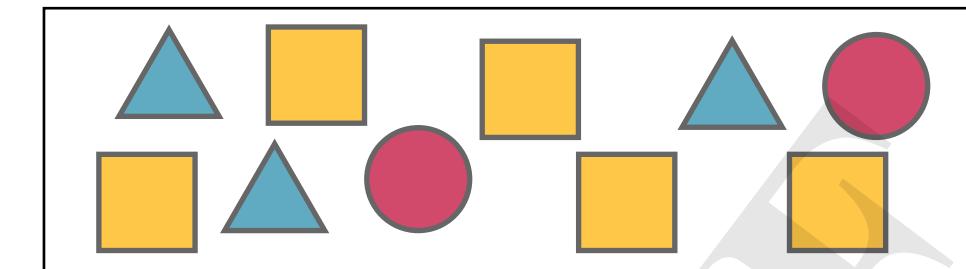
Draw/colour in notebook



Solve **Question 1** from **Exercise 1**



Objects to count (Teacher to draw it on board)



An activity for single student



(Colour boxes) How many?
Children to colour/shade in this manner in notebook



An activity for a group of four

Each group is given "ones of base-10 blocks, to repeat one-more activity."



(15-20 minutes)
Activity ends with show and tell by (one or more) groups.



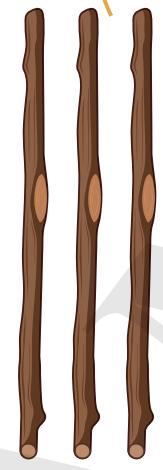
Making Friends

More or Less

STARS



PENS-CAPS



STICKS



PENS



Matching size of two sets

Use in following contexts

- 2 groups of children
- Set of children vs set of bags
- Set of notebooks vs set of pencils
- Set of bottles vs set of caps

Teacher notes:

- Make friends (1-1)
- If a set-item has no friend to match, that set has MORE elements

Linking Numerals with MORE than



Count and compare



5 is more than 3

$$5 > 3$$



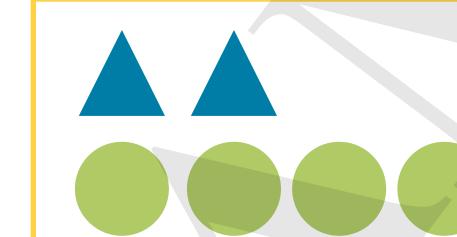
5 is more than 4

$$\square > \square$$



\square is more than \square

$$\square > \square$$



\square is more than \square

$$\square < \square$$

DRAW

4 is more than 1

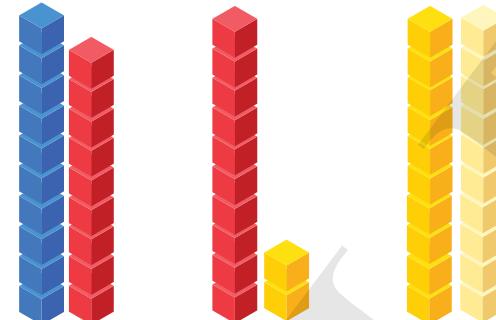
$$\square < \square$$

Solve Question 2 & 3 from Exercise 1



Height Comparison Through Visual Analysis

- Use base 10 bars and blocks
- Show them which one is taller and which one is shorter



An activity for two students

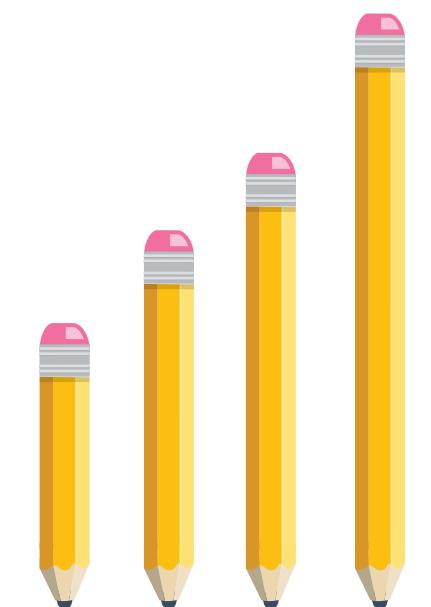
You will need :

- Books of different heights
- Provide each group with two different books.
- Instruct students to visually compare the heights of the two books.
- Encourage the use of descriptive vocabulary (e.g., "taller than," "shorter than").
- Let students discuss and reach a consensus on which book is taller and which is shorter.



An activity for five to six students

- Collect one pencil from each member.
- Compare the heights of pencils.
- Sort them.
- Ask each student to show sorting to class.



Weight Comparisons: Same Shape, Different Weights



An activity for two students

You will need :

- Hollow and Solid objects of same size and shape(3D)
- A pair for each group
- Each member lifts each object.
- Decide which one is heavier.
- Put Lighter object on left and Heavier on right.



An activity for single student

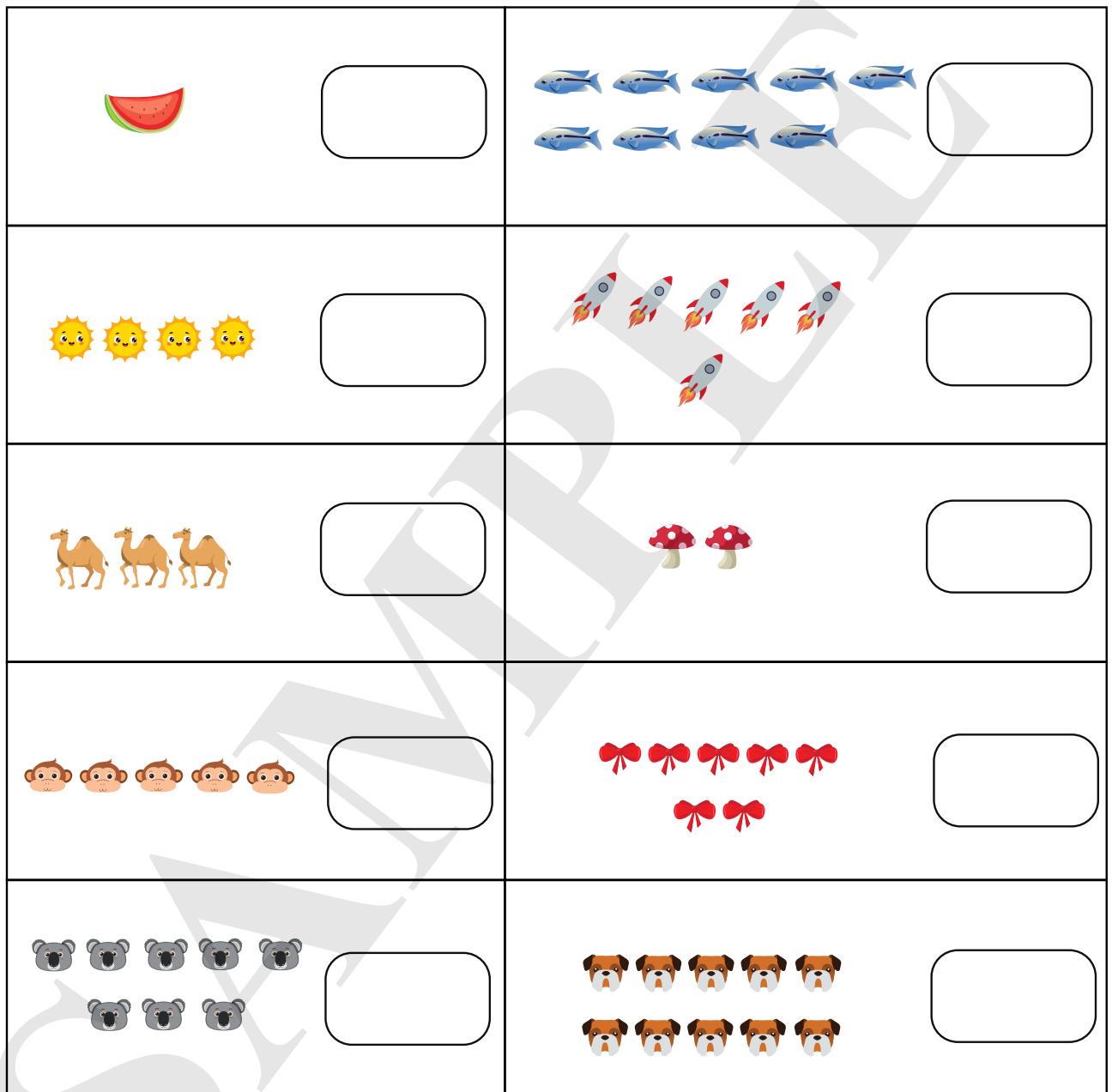
- Choose 5 items from Bag.
- Hold each item and see which one feels the lightest.
- Put the lightest one on left.
- Hold remaining items one by one and compare their weight.
- Arrange them in order ; lightest on left and heavier on right.



Exercise 1

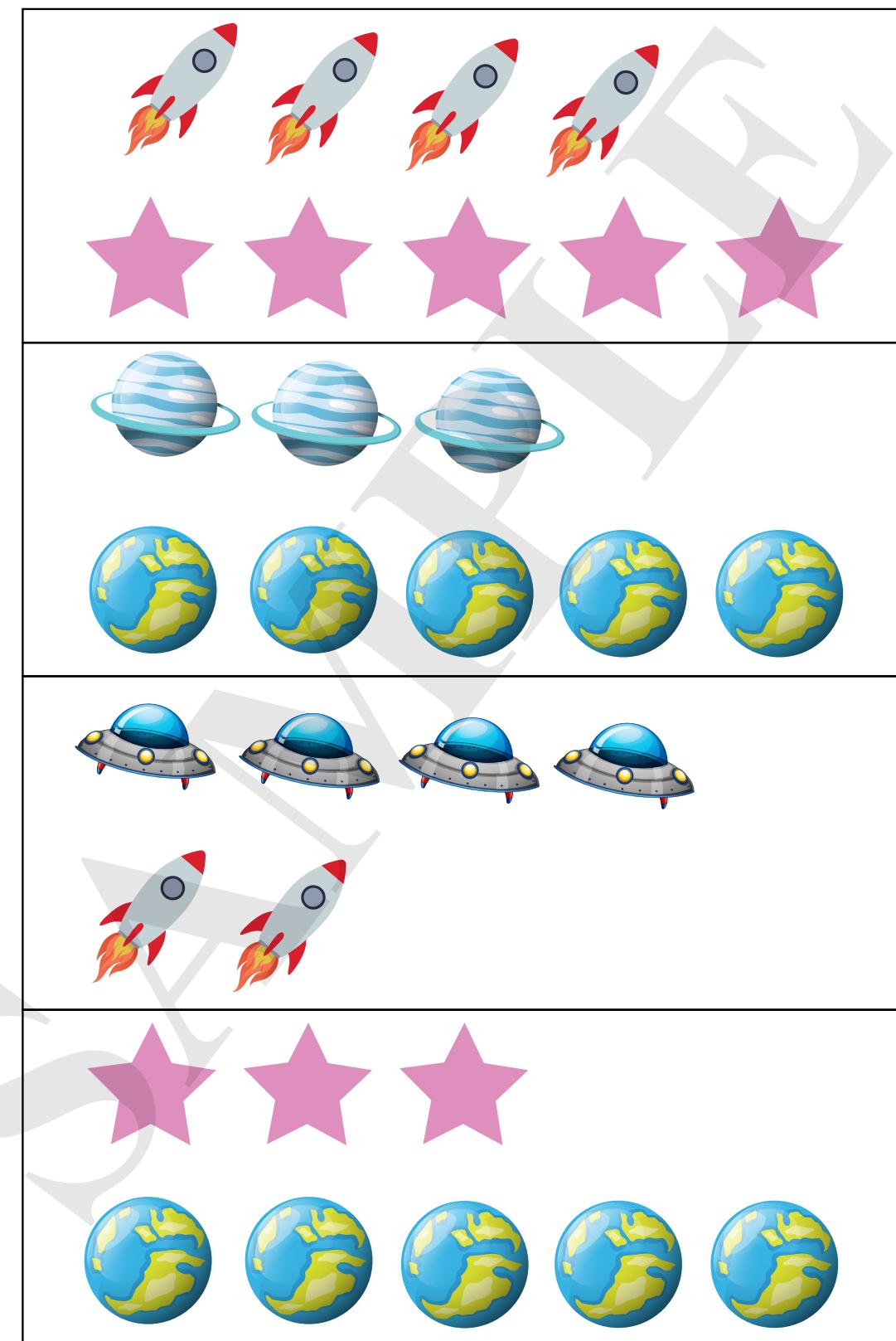
Recap Vocabulary: Length, Mass, Tall, Short, Heavier, Lighter, Greater, Smaller.

Question 1: Count the given objects and write the number in the box.



Exercise 1

Question 2: Match the objects and mark the row with “more” objects.



وطن ہمارا آزاد کشمیر

وطن ہمارا آزاد کشمیر، آزاد کشمیر، آزاد کشمیر

وطن ہمارا آزاد کشمیر، آزاد کشمیر، آزاد کشمیر

باغون اور بھاروں والا
دریاؤں کو ہساروں والا

آسمان ہے جس کا پرچم
پرچم چاند ستاروں والا

جنت کے نظاروں والا
جموں اور کشمیر ہمارا

وطن ہمارا آزاد کشمیر، آزاد کشمیر، آزاد کشمیر

وطن ہمارا آزاد کشمیر، آزاد کشمیر، آزاد کشمیر

کوہستانوں کی آبادی
پہنچکی تاج آزادی

عزت کے پروانے جاگے
آزادی کی شمع جلادی

جاگ اٹھی ہے ساری وادی
ضامن ہے اللہ تمہارا

وطن ہمارا آزاد کشمیر، آزاد کشمیر، آزاد کشمیر

وطن ہمارا آزاد کشمیر، آزاد کشمیر، آزاد کشمیر

کر کے لاچ کیوں او شیطان
کیوں بچیں ہم دین وايمان

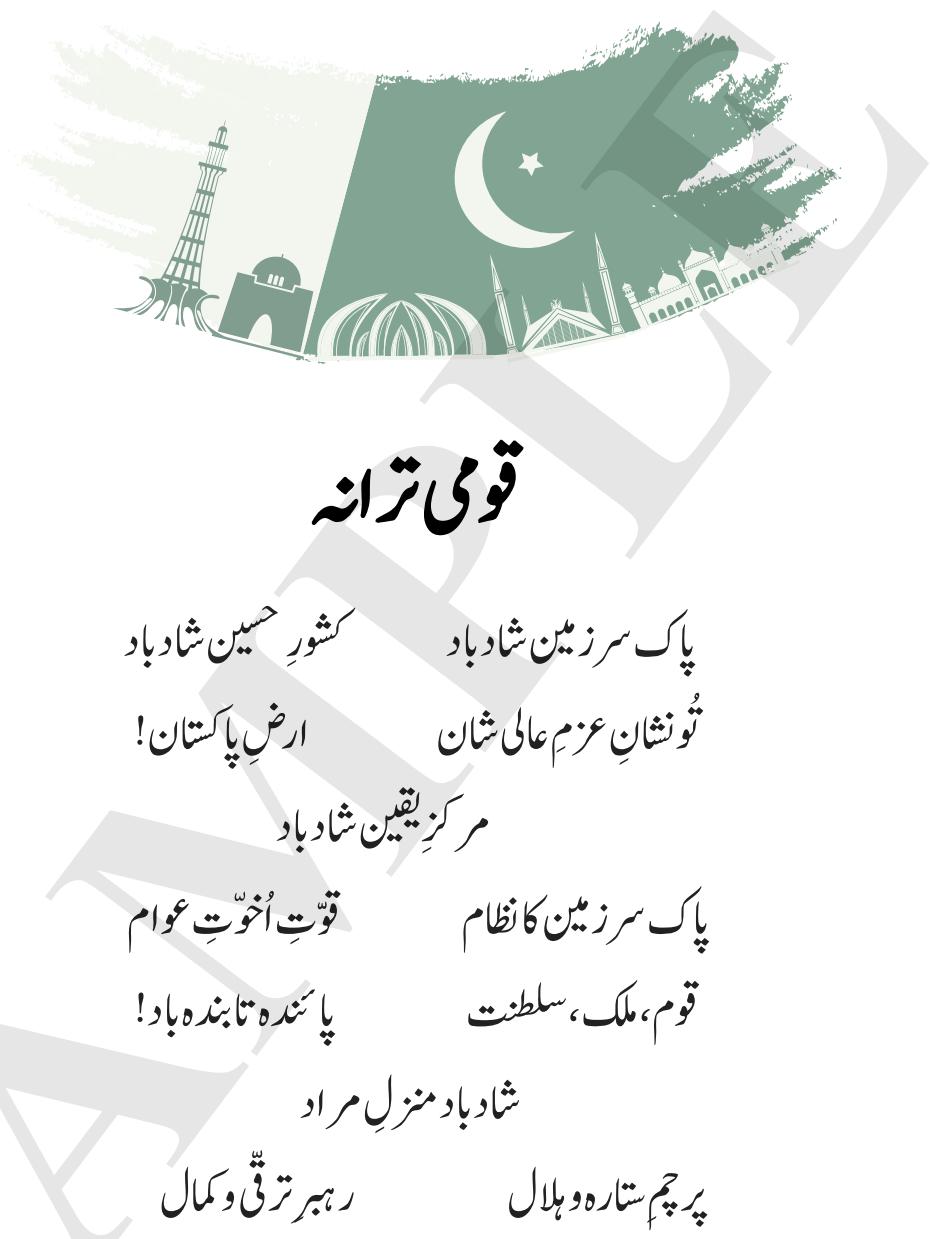
پاکستان کے ساتھ کھڑے ہیں
عزت حرمت حکم قرآن

جان بھی قربان مال بھی قربان
مال سے پیارا جان سے پیارا

وطن ہمارا آزاد کشمیر، آزاد کشمیر، آزاد کشمیر

وطن ہمارا آزاد کشمیر، آزاد کشمیر، آزاد کشمیر

SAMPLE



قومی ترانہ

پاک سر زمین شاد باد
کشورِ حسین شاد باد

تُونشانِ عزم عالی شان
ارضِ پاکستان!

مرکزِ یقین شاد باد

پاک سر زمین کا نظام
قوّتِ اخوّتِ عوام

پاکستاندہ تابندہ باد!
قوم، ملک، سلطنت

شاد باد منزلِ مراد

رہبر ترقی و کمال
پرچم ستارہ و ہلال

ترجمانِ ماضی، شانِ حال
جانِ استقبال!

سایہِ خدا نے ذوالجلال