Starter

NEW COUNTDOWN

Second Edition

Teaching Guide

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Contents

Introduction

The rapidly changing world of today needs children to be very familiar with mathematical concepts at every stage in life. More and more information needs to be shared with children than in the last century.

Needless to say, this must begin at the very start of their formal education.

The approach followed by ***New Countdown (Second Edition) Starter*** aims to teach the most fundamental mathematical concepts through play and activities that engage rather than intimidate the child. The textbook is the primary source of exercises on various topics such as colours, line formation, shapes, size, patterns, and number formation. This teaching guide offers detailed lesson plans and additional material to enable the teacher to adopt a flexible, student-oriented strategy.

This teaching guide provides access to the following:

- Detailed lesson plans to cover each unit completely, including teaching objectives, learning curves, learning activities, and guidance to implement textbook exercises
- Answers to exercises in the textbook
- Worksheets to reinforce the concepts covered in each unit.

How to use the lesson plans

This guide contains 41 lesson plans that cover all the units and concepts covered in the textbook. These plans are flexible and can be adapted to the specific needs of your learners and the classroom environment.

The **objective** can be used as a starting point to plan the lesson. It can also be used as a benchmark to assess whether the lesson has been delivered effectively. For example, by the end of Lesson 2 of Unit 5, you can assess whether the children completed the pattern exercise correctly, and thus whether the lesson was successful.

The **learning curve** orients you in the direction the current lesson should take. It helps you to base the lesson on specific concepts and skills that the children have acquired in previous lessons. It indicates the extent to which the present concepts must be established in order to serve as the foundation for more complex concepts and skills.

The **learning aids** include the objects that you will need to achieve the learning outcomes. Most of the learning aids are those that are commonly used in the pre-primary classroom. You are free to substitute materials that are more readily available and that you believe will enable the concepts to be delivered more effectively.

The **learning activities** offer detailed, step-wise guidance to introducing the concepts in the classroom and helping children to achieve the cognitive and skills objectives. You can follow these steps as written or modify them to suit your specific needs. These activities build the conceptual foundation in a play-oriented environment which supports the completion of exercises in the textbook.

Step-wise instructions are also provided for teaching the concepts and completing the exercises in the textbook. The approximate time required for each exercise is also indicated to guide planning.

Classroom organization tips and suggestions are offered which can make the concepts come alive in the classroom and increase the children's exposure to what they have learned. You can incorporate these suggestions in how the classroom is organized so that children remain engaged with the concepts long after the specific lesson.

Answers

This teaching guide contains solutions to the exercises in the textbook. You can refer to these solutions in order to guide the children along the correct course as they attempt the exercises.

Worksheets

The 12 worksheets at the end of the teaching guide cover all the units in the textbook. They can be administered after the unit has been covered in the classroom as reinforcement.

Some ideas on teaching mathematics at the pre-primary level

You can make the learning of mathematics an enjoyable and enriching process for the children by keeping a few things in mind.

Make mathematics reflect the everyday life of the children. The teaching of mathematics should not be limited to doing exercises in the textbook. Link each concept to aspects of children's lives at home, school, or in the playground. By doing this, you will enable better perception, retention and application of the concepts.

Emphasize the different aspects of mathematics equally. It is important to maintain equal focus on the teaching of size, symmetry, patterns, and shapes as well as numbers and counting. This contributes to developing mathematical sense in the children as opposed to simple numerical competence.

Where possible, link the teaching of mathematics with other subjects and learning areas. Children have relatively few opportunities to engage with parents and others in terms of numbers and mathematical ideas than with languages. By blending mathematical concepts with art, music, and language, you can broaden the scope for application of mathematical concepts and skills.

Engage with parents and encourage them to play an active part in developing the mathematical competency of their child. Children understand mathematical concepts better when they are given opportunities to explore mathematical skills at home.

A child-centred approach that addresses the unique learning needs of every child needs to be adopted. A one-size-fits-all approach is counterproductive because some children may feel alienated. The lack of sufficient opportunities in the wider environment for children to apply mathematical knowledge increases the chances that children will be put off mathematics for good.

When a child is helped to acquire mathematical skills instead of having concepts imposed on the mind through various 'teaching techniques', he or she uses 100% of their capacity. This addresses the challenge teachers face today of working with children of differing abilities. More able children can be stretched to use their maximum potential by giving them a few additional exercises along similar lines, while children with limited learning skills continue to work at their own pace.

It must be emphasized here that children love to hear encouraging words such as 'Good', 'Well done', or 'Keep it up' as often as possible. A gentle pat on the back can also be very encouraging.

Some suggested activities

Colours

Keep a week aside for each colour discussed.

On 'red day', every child brings a red object from home. A collection of red apples, capsicums, tomatoes, roses, and other red objects might appear on the teacher's desk.

Red remains constant, but the shapes be are diverse, ranging from a ball to an apple, hat, pencil, rose, and so on.

Similar activities may be conducted with blue, green, and yellow.

On 'blue day', you could take the children outside and draw their attention to the blue sky and blue water.

On 'green day', the children could be taken out for a walk in the garden to observe the green grass, leaves, and vegetables being cultivated.

Display charts showing different coloured objects: red on one, blue on another, yellow on the third, and so on.

From a box of assorted toys, children can be asked to pick out 1 blue hat, 2 red shoes, 3 green marbles, etc.

Shapes

Each child is given a plateful of paper cut-outs shaped like cubes, cuboids, spheres, cylinders, etc.

You can ask the children to count and say how many spherical or oval shapes there are on the tray, how many cubes, and so on.

Different fruits such as oranges (sphere), watermelons (oval), and objects resembling other shapes can be brought into the classroom and the shapes discussed. You could cut the watermelon into cube, cuboid, cone and cylindrical shapes and distribute them to the students.

Objects of various shapes can be arranged on the teacher's desk, e.g. spherical objects (a ball, a marble, and a football), ovoid objects (an egg, a rugby ball, and an oval watermelon), conical objects (an ice-cream cone and a clown's hat), and cube-shaped objects (a sugar cube and a floor cushion). The children can be asked to come to the desk and identify objects with the same shape.

Size

Children learn the concept of big and small in the classroom using objects around them, e.g. a big piece of chalk and a small one, a big book and a small one, etc.

In the garden, they could observe a big tree and a small one, a big leaf and a small one, etc.

Straight and Curved Lines

Children can be asked to draw straight and curved lines in sand using a stick. You can mark two points in the sand and ask students to join the two, first by tracing a straight line in the sand, and then by tracing a curved path.

Children can be walked across a garden from one corner to the diagonally-opposite corner, first in a straight line, and then in a curved line.

Children work with balls. One child kicks the ball along the floor to another child. The ball may take a straight path or a curved path. The ball is then thrown through the air to be caught by another child. The ball would normally follow a curved path.

Numbers 1 to 5

It is essential to point out to the children the fact that numbers exist in nature. For example:

1 Sun, 1 Moon, 1 nose, 1 tongue, etc.
2 eyes, 2 ears, 2 legs of a bird, etc.
3 petals on spiderwort flower, etc.
4 legs of a dog, 4 wings of a butterfly, etc.
5 fingers on a human hand, 5 legs of a starfish, etc.

Developing Motor Skills

Particular attention should be paid to the development of fine motor skills in preschool children. Here are some interesting activities you can organize alongside the regular teaching activities in order to build children's motor skills simultaneously. These skills will teach them the correct way of holding a pencil in order to draw lines and shapes, and form numbers on the page.

Clay Work

Working with play dough and soft modelling clay is a great way to develop children's fine motor skills. The activity on page 1 of the textbook requires children to fashion a rudimentary stamp out of modelling clay. Through this activity, they can learn to manipulate clay through rolling, squeezing and pressing actions.

Clay work can be used when working through other units of this book, including the units on 3D shapes, size, patterns, and counting. Children can be asked to create various shapes out of modelling clay, make clay eggs or a given number of patties, and so on.

Finger Painting

Finger painting can be an excellent way to develop finger and hand muscles while learning about colours. Finger painting develops colour identification among the children as well as their hand-eye coordination.

You can use finger painting activities when addressing unit 1 on colours as well as subsequent chapters on

numbers. For example, the children may be asked to make 'x' number of fingerprints in a certain colour and 'y' number of fingerprints in a different colour. There are many more activities you can devise depending on the interest and abilities of the children.

Sand Play

The sandpit is simply a tray of reasonable size and depth that is partially filled with sand. Sandpit activities are an effective precursor to drawing lines and writing of numbers with a pencil. Simply leaving the children to play in the sandpit can aid the development of motor skills as they learn to use toy buckets and spades to move the sand around.

The children can be asked to practise drawing straight and curved lines as well as the numbers from 0 to 9 in the sand with a finger. Doing this will help them acquire control over moving their fingers to form a specific number or line before they learn to write with a pencil. Salt could be substituted for sand.

Threading Activities

You can use various threading activities to develop colour, size, shape, pattern, and number concepts. Beads and buttons of different shapes, colours, and sizes can be used. Handling light thread or string can be difficult for children at this stage; you can use pipe cleaners if they are easily available. Alternatively, you could take craft wire and glue some soft felt around it to make it safe for young children.

You can use threading activities to ask children to make strings of beads of a certain colour or colours, shapes (e.g. use only cylindrical beads, or use one spherical and two oval beads in a pattern), patterns (e.g. small blue bead followed by big yellow bead), numbers (five green buttons and seven red buttons), and so on.

Building Blocks

Building blocks are popular toys but they can be used in the preschool classroom to teach various mathematical concepts. By playing with building blocks, children learn to form stable structures, group similar objects, and create order. Their spatial skills and hand-eye co-ordination are enhanced.

Building block activities help develop colour concepts (e.g. stacking red blocks only, or red and blue blocks only), shapes (e.g. create a cube or cuboid structure with the blocks), patterns (e.g. build one tower with three blocks followed by one with four blocks, and so on), and numbers (e.g. build a tower with 'x' number of blocks, etc.).

Sorting

Sorting games are effective because they can be organized as individual play, pair activities, or group games. Different objects such as beads, marbles, shells, and toys can be used and children can be asked to sort them according to colour, shape, size, and number.

Developing Pencil Grip

Children at the preschool level are intuitively comfortable holding a pencil in the fist. The initial exercises in the textbook involve colouring for which the child may be excused for gripping a crayon or coloured pencil in the fist. When the child is required to draw straight and curved lines and write numbers in later units, teaching the correct pencil grip is important.

One of the ways in which you can do this is to develop the pincer grip. The pincer grip involves the use of the thumb and index finger and can be developed easily in preschool children. The various activities described above would already have developed some degree of fine motor skills. To develop the pincer grip, follow these steps:

1. Lay the pencil on the table and ask the child to hold it near the point with the index finger and thumb.
2. Help the child raise the hand so that the pencil hangs vertically from the pincer grip.
3. All you need to do is hold the opposite end of the pencil and bring it all the way back to place it in-between the thumb and index finger of the child. The pincer grip is used as a pivot and thus stays in place.

The child is now holding the pencil in the correct way. With some practice, the child will be able to do this independently.

LESSON PLANS
Unit 1: Colours

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to identify the colours blue, red, yellow, and green in their immediate environment.

LEARNING CURVE

The children may be familiar with some colours, especially if their parents have been teaching them. They can now be introduced to the colours blue, red, green, and yellow by showing various toys and other everyday objects in these colours. They should be able to sort objects by colour.

LEARNING AIDS

Modelling dough, plastic trays, poster paints in blue, red, green, and yellow; flowers, buttons, building blocks, beads, pieces of fabric, etc. in the four colours, and four transparent plastic bins

LEARNING ACTIVITY (20 MINUTES)

Step 1. The different objects should be spread on the floor or work area and the children given some time to explore them.
Step 2. Stick a band of paper in one of the four colours on one side of each bin to designate them as blue, red, green, and yellow bins.
Step 3. Pick one of the bins at random and ask the children, one by one, to fetch an object that matches the colour of the bin and place it there. Call out the name of the colour and ask the children to repeat it out loud after each successful attempt.
Step 4. Repeat this until all the objects have been sorted into the correct bins.

TEXTBOOK EXERCISE (10 MINUTES)

Step 1. Place some poster paint in the four trays in the work area.
Step 2. Demonstrate how children can take some modelling dough and shape it into a ball. Then demonstrate how to flatten the base by pressing it against the floor or tabletop. Since children's motor skills are not very well-developed, they may require some practice to get the rolling movements right.
Step 3. The children should then dip the stamp into the paint tray and stamp inside the circles of the matching colours on page 1.

CLASSROOM ORGANIZATION (10 MINUTES)

The children can be divided into four groups and each corner of the classroom be designated a different colour, e.g. red corner, green corner, and so on. Each group may then be asked to decorate each corner with objects of that colour, e.g. using blue toys, pictures, scarves, etc. to decorate the blue corner, and so on.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to distinguish between blue, red, yellow, and green objects in their environment.

LEARNING CURVE

The children have learnt to identify the four colours from the previous lesson. They should now learn to differentiate between the colours and perform tasks that require correct identification of colours.

LEARNING AIDS

String, paper circles in the four colours, beads or blocks in the four colours, and glue

TEXTBOOK EXERCISES (40 MINUTES)

Page 2 (20 minutes)

Step 1. Ask the children to identify the colours of the beads in each string on page 2.
Step 2. Place the paper circles sorted by colour in three trays in the work area. Point to one string on the page and ask the children to identify the tray with the matching paper circles or 'beads'.
Step 3. Demonstrate how children should pick a paper circle, dip one side into the glue, and then paste it in the correct circle on the page. You may have to help the children get it right by holding their hands and guiding them initially.

Page 3 (10 minutes)

Step 1. Ask the children to identify and name the colour of each butterfly on the page.
Step 2. Repeat this with the flowers along the bottom of the page. Ask them to identify butterflies and flowers of the same colour.
Step 3. Help the children trace the line joining the blue butterfly and flower with their finger.
Step 4. Demonstrate how the children should hold a pencil and draw lines to match each butterfly to a flower of the same colour. Ask the children to continue until the exercise is complete.

Page 4 (10 minutes)

Step 1. The children may now learn to draw circles with crayons of different colours.
Step 2. Go over the pictures with them. First, help them identify the objects shown on the page. Next, ask them to state the colour of each object.
Step 3. Read out the questions, one by one, on page 4 and ask the children to identify the correct object. Repeat the question if the children identify the wrong object.
Step 4. Place several blue, red, yellow, and green crayons in the work area and ask the children to pick up the colour required in the question. Then, help them to draw a circle around the correct object.

Unit 2: Straight Lines

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to draw horizontal lines.

LEARNING CURVE

The children have developed skills in holding pencils and crayons and drawing lines and circles. In this lesson, they should learn how to draw straight horizontal lines using a pencil.

LEARNING AIDS

Beads, toy cars, building blocks, and pencils

LEARNING ACTIVITY (20 MINUTES)

Activity 1

Step 1. Ask the children to stand together in the centre of the room.
Step 2. Explain that as you call out the name of each child, he or she is to walk up to you and line up shoulder-to-shoulder with the previous child. The objective is to teach children what a straight line is.
Step 3. Call out the names of the children one by one. You may ask the other children to clap as the child walks up to the correct position in the line. If a child falls out of line, ask them to move a bit so that they are aligned next to child to their right. Reinforce by stating that the line has to be straight.

Activity 2

Step 1. Place the objects randomly on the table.
Step 2. Explain that as you call out the name of an object, the children are to pick them from the pile and arrange them in a straight line in their work area.
Step 3. Call out the names of the objects and guide the children as they align them in a straight line. You can reinforce the concept of colours by calling out 'blue block', 'green bead', and so on. Correct any deviations in the straightness of the line.
Step 4. Once all objects have been called out, ask the children to trace a straight line below their train of objects with a finger. Repeat this several times.

TEXTBOOK EXERCISE (20 MINUTES)

Page 5

Step 1. Explain that the children will now learn to draw a straight line on the page.
Step 2. Point to the rabbit and ask what it is. Next, point to the carrot and explain that it is the rabbit's food and that it needs to get to it.
Step 3. Ask how the rabbit can get to the carrot. Trace your finger along the dotted line. Do this slowly and explain that the rabbit is getting closer and closer to the carrot. Once your finger reaches the carrot, ask the children to clap.
Step 4. Ask the children to follow the dotted line with a finger.
Step 5. Now, demonstrate how to draw a straight line with a pencil by joining the dots from the rabbit to the carrot.
Step 6. Repeat with the cat and the milk.
Step 7. Ask the children to complete the straight lines on the page.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to draw vertical lines.

LEARNING CURVE

The children have developed skills in drawing straight horizontal lines with a pencil. They should now learn how to draw vertical lines.

LEARNING AIDS

Beads, toy cars, building blocks, and pencils

LEARNING ACTIVITY (20 MINUTES)

Activity 1

Activity 1 from the previous lesson can be repeated by asking the children to form a vertical line instead of a horizontal one.

Activity 2

Activity 2 from the previous lesson should be repeated by asking the children to arrange the objects in a vertical line instead of a horizontal one.

TEXTBOOK EXERCISE (20 MINUTES)

Page 6 (10 minutes)

Step 1. Explain that the children will now learn to draw a straight vertical line on the page.
Step 2. Point to the fruits and the children standing beneath the trees. Ask the children what is happening in the picture. What do the children in the picture want?
Step 3. Trace your finger along the dotted line and explain that this is how the fruit would drop into the child's hands.
Step 4. Ask the children to follow the dotted line with a finger.
Step 5. Now, demonstrate how to draw a straight line with a pencil by joining the dots from the fruit to the child.
Step 6. Repeat the same exercise with the other two children on the page.
Step 7. Ask the children to complete tracing the straight lines on the page. Demonstrate the falling of a small ball from the top of a desk. The object takes a straight vertical path to the floor.

Page 7 (10 minutes)

Step 1. Explain that the robot needs to get to the toys on the beach.
Step 2. Ask the children to trace the dotted line that connects the robot to the toys with a finger.
Step 3. Ask the children to join the dots with a pencil.

Unit 3: Curved Lines

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to draw curved lines.

LEARNING CURVE

The children have developed skills in drawing straight lines with a pencil. They will now learn how to draw curved lines.

LEARNING AIDS

Sandpit and pencils

LEARNING ACTIVITY (10 MINUTES)

Activity 1

Step 1. Introduce curved lines by tracing one with a finger in a sandpit. Children, one by one, repeat the same.
Step 2. You could ask the children to draw straight and curved lines alternately to familiarize them with the different forms of lines, straight and curved.
Step 3. Now, trace a curved line in the air with a finger and ask the children to do the same. Ask them to trace curved lines on different surfaces such as the floor, the tabletop, the window, and so on.

Activity 2

Ask one child to stand behind another and trace a straight horizontal, straight vertical, or curved line with a finger on his back. The child is required to correctly identify the type of line.

TEXTBOOK EXERCISE (30 MINUTES)

Page 8 (10 minutes)

Step 1. Explain that they will now learn to draw a curved line on the page.
Step 2. Point to the kangaroo and explain what it is. Next point to the grass and explain that the kangaroo is hungry and needs to get to the sweet grass. How should it get there?
Step 3. Trace your finger along the dotted curved line and explain that this is the path the kangaroo would follow.
Step 4. Ask the children to follow the dotted line with a finger.
Step 5. Draw a curved line with a pencil by joining the dots from the kangaroo to the grass.
Step 6. Ask the children to trace the dotted lines on the page.
Step 7. Repeat steps 1-6 with the fish exercise.

Page 9 (20 minutes)

Step 1. Help the children identify the objects shown on the page. You may also ask them to act out how these objects are used. You can perform a bouncing action in the air as one would with a ball, and so on with the other objects.
Step 2. Explain that the outlines of these objects can be drawn by joining the dots with a pencil.
Step 3. Select one of the objects and trace along the dotted lines with your finger.
Step 4. Now, join the dots with a pencil.
Step 5. Repeat steps 3 and 4 with all the objects on the page.
Step 6. Ask the children to colour the objects.

Unit 4: Shapes

LESSON 1

OBJECTIVE

By the end of this lesson, the students should be able to identify and draw a cube and a sphere.

LEARNING CURVE

Students are very likely to come across three-dimensional objects in their environment. Therefore, they can be introduced to 3-D shapes such as cubes and spheres prior to 2-D shapes.

LEARNING AIDS

Various toys and objects shaped like cubes and spheres

LEARNING ACTIVITY (20 MINUTES)

Activity 1 (10 minutes)

Step 1. Arrange the various cube-shaped objects in the work area and encourage the children to explore them.
Step 2. Encourage them to feel the faces, edges, and corners of the objects. Explain that all these objects are cube-shaped.
Step 3. Hold up each object and call out the word 'cube' while moving your hand across the faces, edges, and corners. Ask the children to do the same.

Activity 2 (10 minutes)

You can perform a similar activity, substituting spherical objects for cubes.

TEXTBOOK EXERCISE (20 MINUTES)

Page 10

Step 1. Ask the children to look at the objects on the page. Ask them to identify the objects shaped like a cube. Next, ask them to identify the objects shaped like a sphere.
Step 2. Trace the cube by moving your finger along the dotted lines. Ask the children to do the same.
Step 3. Repeat step 2 with the picture of the sphere.
Step 4. Ask the children to draw and colour the shapes.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to identify and trace a cuboid and a cylinder.

LEARNING CURVE

Since the children are familiar with cubes and spheres, two more shapes, i.e. cuboids and cylinders can be introduced.

LEARNING AIDS

Various toys and objects shaped like cuboids and cylinders; cuboids such as tissue boxes, cereal boxes, books, and cylinders such as bottles, vases, and tins

LEARNING ACTIVITY (20 MINUTES)

Activity 1 (10 minutes)

Step 1. Arrange the various cuboid objects in the work area and encourage the children to explore them.
Step 2. Encourage them to feel the faces, edges, and corners. Explain that all these objects have a cuboid shape.
Step 3. Hold up each object and call out the word 'cuboid' while moving your hand across the faces, edges, and corners. Ask the children to do the same. Explain that some faces of the cuboid are longer than others.

Activity 2 (5 minutes)

You may perform a similar activity as above, substituting cylindrical objects for cuboids.

Activity 3 (5 minutes)

The children dip the faces of a cuboid in paint and print the faces on some newspaper. Compare the shapes of the different faces and explain the difference.

TEXTBOOK EXERCISE (20 MINUTES)

Page 11

Step 1. Ask the children to look at the objects on the page. Ask them to identify the objects shaped like a cuboid. Next, ask them to identify the objects shaped like a cylinder.
Step 2. Trace the cuboid by moving your finger along the dotted lines. Ask the children to do the same.
Step 3. Repeat step 2 with the picture of the cylinder.
Step 4. Ask the children to draw and colour the shapes.

LESSON 3

OBJECTIVE

By the end of this lesson, the children should be able to identify and draw a cone and an ovoid.

LEARNING CURVE

Since the children are familiar with cubes, spheres, cuboids, and cylinders, cones and ovoids can be introduced.

LEARNING AIDS

Various toys and objects shaped like cones and ovoids

LEARNING ACTIVITY (20 MINUTES)

Activity 1 (10 minutes)

Step 1. Arrange the various conical objects in the work area and encourage the children to explore them.
Step 2. Encourage them to feel the faces, edges, and corners of the objects. Explain that all these objects have a conical shape.
Step 3. Hold up each object and call out the word 'cone' while moving your hand across the faces, edges, and corners. Ask the children to do the same.

Activity 2 (10 minutes)

You can perform a similar activity, substituting ovoid objects for cones.

TEXTBOOK EXERCISE (20 MINUTES)

Page 12

Step 1. Ask the children to look at the objects on the page. Ask them to identify the objects shaped like a cone. Next, ask them to identify the objects shaped like an ovoid.
Step 2. Trace the cone by moving your finger along the dotted lines. Ask the children to do the same.
Step 3. Repeat step 2 with the picture of the ovoid.
Step 4. Ask the children to draw and colour the shapes.

Unit 5: Patterns

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to recognize and complete patterns.

LEARNING CURVE

Since the children are familiar with some colours and shapes, they should move on to identifying patterns based on recurring colours and shapes.

LEARNING AIDS

Identical objects such as water bottles of the same size, building blocks of the same colour and shape, etc.

LEARNING ACTIVITY (20 MINUTES)

Step 1. Place the objects in the centre of the work area.
Step 2. Pick out an object at random and call out its name, e.g. 'bottle'. Ask the children to repeat the name. Place the object in front of you on the work area.
Step 3. Pick out another object and call out its name, e.g. 'red block'. Ask the children to repeat the name. Place the object next to the first object.
Step 4. Repeat steps 2 and 3 to form a chain. Choose the same objects you did in steps 2 and 3. As you do, continue repeating the names of the objects in the pattern, e.g. 'bottle, red block, bottle, red block'.
Step 5. Stop at regular intervals and ask the children which object should come next in the pattern. Pick out the correct object and continue the series.

TEXTBOOK EXERCISE (20 MINUTES)

Page 13

Step 1. Ask the children to look at the objects on the page. Select the first series and identify the objects. Call them out clearly, 'ball, butterfly, ball, butterfly, ball, butterfly'.
Step 2. Repeat step 1 with the next two series.
Step 3. Now, call out the series at the bottom of the page, 'blue cylinder, red square, blue cylinder, red square'. As you approach the blank box, ask the children which shape should follow.
Step 4. When the children give the correct answer, i.e. red square, ask them to point to it in the next line. Ask them to draw a line from that object to the blank box.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to recognize and complete patterns.

LEARNING CURVE

The children should continue with the practice of recognizing and completing patterns.

TEXTBOOK EXERCISE (30 MINUTES)

Page 14

Step 1. Ask the children study the first series. Ask them to note which way the shape points.
Step 2. When the children come to the blank space, ask them what should go in the blank space. Which way should it point?
Step 3. When the children call out the correct answer, ask them to draw the shape in the air. Next, ask them to draw it in the space with a pencil.
Step 4. Ask them to identify which colour the object should be. Help them choose the correct colour crayon or pencil and colour the shape on the page.
Step 5. Repeat steps 1 to 4 with the remaining patterns on the page.

CLASSROOM ORGANIZATION (10 MINUTES)

Carry out a verbal activity by asking one child to call out a colour, say blue, and another student to call out another colour, say red. The other children should continue with the same series, i.e. blue, red, blue, red, and so on. You can select children at random or in a series depending on what raises the interest level of the students.

Unit 6: Size

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to recognize opposites such as big and small.

LEARNING CURVE

The children are likely to have come across similar objects in different sizes. Hence, their awareness of concepts such as big and small may be developed at this level.

LEARNING AIDS

Objects in different sizes such as big and small balls and toy cars, etc.

LEARNING ACTIVITY (20 MINUTES)

Step 1. Pick out a large ball from the toys and hold it up. Ask the children to identify it.
Step 2. Now, pick out a smaller ball and hold it up. Ask the children to identify it.
Step 3. Hold up the big ball and say, 'big ball'. Ask the children to repeat your words.
Step 4. Hold up the smaller ball and say, 'small ball'. Ask the children to repeat your words.
Step 5. Repeat this exercise with other objects such as cars, dolls, bats, and so on.

TEXTBOOK EXERCISE (20 MINUTES)

Page 17

Step 1. Ask the children to look at the objects in the bottom half of the page.
Step 2. Read out the question and ask the children to identify the big house and the small house.
Step 3. Next, ask them to draw a circle around the big house with a pencil.
Step 4. Repeat steps 2 and 3 with the big and small shoes.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to recognize opposites such as short and long.

LEARNING CURVE

The children are likely to have come across similar objects in different sizes. Hence, their awareness of concepts such as long and short may be developed at this level.

LEARNING AIDS

Objects in different sizes such as long and short pencils, etc.

LEARNING ACTIVITY (20 MINUTES)

Step 1. Pick out a long piece of string from the toys and hold it up. Ask the children to identify it.
Step 2. Now, pick out a smaller piece of string and hold it up. Ask the children to identify it.
Step 3. Hold up the long string and say, 'long string'. Ask the children to repeat your words.
Step 4. Hold up the shorter string and say, 'short string'. Ask the children to repeat your words.
Step 5. Repeat this exercise with other objects such as pencils, bats, dolls' hair, etc.

TEXTBOOK EXERCISE (20 MINUTES)

Page 17

Step 1. Ask the children to look at the objects in the top half of the page.
Step 2. Read out the question and ask the children to identify the long ruler and short ruler.
Step 3. Next, ask them to draw a circle around the short ruler with a pencil.
Step 4. Repeat steps 2 and 3 with the long and short string.

Unit 7: Numbers 1 to 5

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 1.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

This activity can be carried out on page 18 of the textbook.

Step 1. Point to the picture of the girl. Ask what the girl is holding. They should reply with 'flower' or 'balloon'.
Step 2. Ask the children how many flowers or balloons there are. Since the children may not know the answer, you should say 'one flower' while pointing to the picture. Similarly, say 'one balloon' while pointing to the picture.
Step 3. Hold up one finger as shown on page 18 and say 'one' out loud. Ask the children to do the same. Repeat this several times until the children become fluent.
Step 4. Now point to the bottom-right corner of the page and call out 'one'. Ask the children to repeat this after you. Trace the number 1 in the air with a finger. The children should be asked to do the same. Repeat this several times until the children are confident.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'one block' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'one flower', 'one doll', 'one cup', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 1 on the sheet. This is now the '1 corner' of the classroom.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 1.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years. It is important for children to learn to identify the number 1 in nature, e.g. 1 Sun, 1 Moon, 1 fountain, etc. Then they come back to the classroom and identify 1 fan, 1 board, 1 teacher's desk, etc.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 19 (20 minutes)

Step 1. Ask the children to look at the first row on the page. Ask them to identify the object. Next, ask them how many. They should answer, 'one flower'.
Step 2. Ask them to trace the number one in the air with a finger. Next, ask them to trace it with their finger on the page following the dotted line and the arrow.
Step 3. Once the children are familiar with the formation, ask them to use a pencil to trace the number one across the row.
Step 4. Repeat steps 1 to 3 for the remaining rows on the page.

Page 20 (20 minutes)

Step 1. Ask the children to look at the first pair of apples. Ask them to select one apple of the two.
Step 2. Ask the children to trace a circle around the apple with a finger.
Step 3. Next, ask the children to draw a circle around the apple with a pencil.
Step 4. Repeat steps 1 to 3 with the other fruit pairs.
Step 5. Ask the children to identify the fruits in the basket and colour them.

LESSON 3

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 2.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 21 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'two blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'two flowers', 'two dolls', 'two cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 2 on the sheet. This is now the '2 corner' of the classroom.

LESSON 4

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 2.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years. Children should learn that the word 'pair' indicates a set of two.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 22 (20 minutes)

The exercise on page 22 of the textbook can be carried out by following the approach adopted for lesson 2.

Page 23 (20 minutes)

Step 1. Ask the children to identify and count the objects.
Step 2. Read out the first question and ask the children to count two balloons. Then ask them to colour them in the required colour. They should then colour the remaining balloon green.
Step 3. Ask the children colour the flowers in the same way.

LESSON 5

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 3.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 24 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'three blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'three flowers', 'three dolls', 'three cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 3 on the sheet. This is now the '3 corner' of the classroom.

LESSON 6

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 3.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 25 (20 minutes)

The exercise on page 25 of the textbook can be carried out by following the approach adopted for lessons 2 and 4.

Page 26 (20 minutes)

Step 1. Ask the children to look at the picture of the table and identify some of the objects that are familiar to them.
Step 2. Read out the question and ask the children to identify the required number of objects.
Step 3. Ask the children to colour the objects in the required colours.

LESSON 7

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 4.

LEARNING CURVE

the children should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 27 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'four blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'four flowers', 'four dolls', 'four cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 4 on the sheet. This is now the '4 corner' of the classroom.

LESSON 8

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 4.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 28 (20 minutes)

The exercise on page 28 of the textbook can be carried out by following the approach adopted for lessons 2, 4, and 6.

Page 29 (20 minutes)

Step 1. Ask the children to look at the picture of the table and identify them. You may also ask them to count the number of each object.
Step 2. Read out the question and ask the children to identify the sets of 4.
Step 3. Have them trace an oval around the sets with a finger.
Step 4. Now ask them to draw an oval around each set with a pencil.
Step 5. Follow the same approach for the sets of 3.

Note: Children should learn to recognize numbers in nature. A visit to the zoo provides opportunities to learn about animals with 4 legs, e.g. lion, deer, elephant, etc.

LESSON 9

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 5.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 30 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'five blocks' from the toy shelf.

Thank them when they do so. Continue to do this with all the children by asking them to fetch 'five flowers', 'five dolls', 'five cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 5 on the sheet. This is now the '5 corner' of the classroom.

LESSON 10

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 5.

LEARNING CURVE

The children should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 31 (20 minutes)

The textbook exercise on page 31 of the textbook can be carried out by following the approach adopted for lessons 2, 4, 6, and 8.

Page 32 (20 minutes)

Step 1. Read out the question.
Step 2. Ask the children to count the cupcakes in each set. When they identify five cupcakes in a set, ask them to trace a circle around it with a finger.
Step 3. Next, ask them to draw a circle with a pencil.
Step 4. Ask the children to colour the cupcakes in different colours.

Note: Once again, help children look for 5 in nature, e.g. 5 petals in a flower, 5 fingers, 5 toes, etc.

Unit 8: Numbers 6-9

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 6.

LEARNING CURVE

The children should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 38 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'six blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'six flowers',

'six dolls', 'six cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 6 on the sheet. This is now the '6 corner' of the classroom.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 6.

LEARNING CURVE

The children should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 39 (20 minutes)

The exercise on page 39 of the textbook can be carried out by following the approach adopted for numbers 1-5.

Page 40 (20 minutes)

Step 1. Read out the question.
Step 2. Ask the children to count the petals on each flower. Ask them to colour the flowers as directed.
Step 3. Next, ask them to write the number in the box next to each flower.

LESSON 3

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 7.

LEARNING CURVE

The children should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 41 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'seven blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'seven flowers', 'seven dolls', 'seven cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 7 on the sheet. This is now the '7 corner' of the classroom.

LESSON 4

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 7.

LEARNING CURVE

The children should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 42 (20 minutes)

The exercise on page 42 of the textbook can be carried out by following the approach adopted for lesson 2.

Page 43 (20 minutes)

Step 1. Read out the question.
Step 2. Ask the children to count the hens and write the number in the box.
Step 3. Ask the children to count the flying pigeons and write the number in the box.
Step 4. Ask the children to count the pigeons on the grass and write the number in the box.

LESSON 5

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 8.

LEARNING CURVE

The children should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 44 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'eight blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'eight flowers', 'eight dolls', 'eight cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 8 on the sheet. This is now the '8 corner' of the classroom.

LESSON 6

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 8.

LEARNING CURVE

The children should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 45 (20 minutes)

The exercise on page 45 of the textbook can be carried out by following the approach adopted for lessons 2 and 4.

Pages 46-47 (20 minutes)

Step 1. Ask the children to study the picture of Hamid and Alia.
Step 2. Read out the question on page 47.
Step 3. Ask the children to identify the yellow circles in the picture. Then ask them to count the yellow circles and write the number in the blank box.
Step 4. In a similar way, help the children answer all the questions on the page.

LESSON 7

OBJECTIVE

By the end of this lesson, the children should be able to recognize the number 9.

LEARNING CURVE

The children should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 48 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'nine blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'nine flowers', 'nine dolls', 'nine cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 9 on the sheet. This is now the '9 corner' of the classroom.

LESSON 8

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 9.

LEARNING CURVE

The children should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

LEARNING AIDS

Various objects including toys, flowers, books, etc.

TEXTBOOK EXERCISE (40 MINUTES)

Page 49 (20 minutes)

The exercise on page 49 of the textbook can be carried out by following the approach adopted for lessons 2, 4, and 6.

Pages 50-51 (20 minutes)

Step 1. Ask the children to study the pictures on the pages.
Step 2. Read out the question on page 50 and read through the list below.
Step 3. Explain that they are required to count out the objects on page 51 as specified in the list and draw a circle. Use the example of two shampoo bottles that has been solved on the page.
Step 4. Similarly, count out and circle six bars of soap, seven chocolate bars, and so on until the exercise is complete.

Unit 9: Concept of Zero

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 0.

LEARNING CURVE

The concept of zero should be introduced at this stage so that the children can learn to count to 10 and beyond.

LEARNING AIDS

Various objects and a container such as a box or bin

LEARNING ACTIVITY (20 MINUTES)

Page 52

Step 1. Hold up a box of toys so that the children can clearly see the contents. Ask them how many toys it contains. The children should count the correct number and say it out loud.
Step 2. Now take the toys out one by one and each time ask the children to count the number of toys remaining.
Step 3. When there are no more toys in the box, ask how many toys there are. If they cannot answer, explain that there are no toys, or 'zero' toys in the box.
Step 4. Use similar examples such as the number of books in a bag or the number of flowers in a vase to reinforce the concept of zero.

TEXTBOOK EXERCISE (20 MINUTES)

Pages 52-53

Step 1. Ask the children to count the cats in the box in the first picture. Then, ask them to count the cats in the second box.
Step 2. Ask them what number is used to refer to such a situation. Ask the children to trace the zero figure shown in the box.
Step 3. Similarly, explain the concept of zero using the example of the birds in the cage.
Step 4. Ask the children count the flowers and write the correct answers on page 53.
Step 5. Ask the children to write the numbers 0 to 9 on page 53.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 0.

LEARNING CURVE

The concept of zero should be introduced at this stage so that the children can learn to count to 10 and beyond.

LEARNING ACTIVITY (30 MINUTES)

The learning activity on page 54 of the textbook can be carried out by following the approach adopted for the number 1.

CLASSROOM ORGANIZATION (10 MINUTES)

You can initiate an activity where you call out a child and ask them to fetch you 'ten blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the children by asking them to fetch 'ten flowers', 'ten dolls', 'ten cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 10 on the sheet. This is now the '10 corner' of the classroom.

LESSON 3

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the number 0.

LEARNING CURVE

The concept of zero should be introduced at this stage so that the children can learn to count to 10 and beyond.

TEXTBOOK EXERCISE (40 MINUTES)

Page 55 (20 minutes)

Step 1. Ask the children to look at the first row on the page. Ask them to identify the object. Next, ask them how many. Count the objects with the children, pointing to each brush one at a time as you call out the numbers one, two, three, four, five, six, seven, eight, nine, ten. The students should answer, 'ten brushes'.

Step 2. Ask them to trace the number ten in the air with a finger. Next, ask them to trace it with their finger on the page following the dotted lines and the arrows.

Step 3. Once the children are familiar with the formation, ask them to use a pencil to trace the number ten across the row.

Step 4. Repeat steps 1 to 3 for the remaining rows on the page.

Note: The most important aspect of 10 is that each one of us has 10 fingers and 10 toes. This concept must be explained fully to the children. Each child holds up 10 fingers and counts from 1-10. Teachers should remember that the counting system depends upon the 10 digits of the human hands.

Unit 10: Numbers 11 to 20

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the numbers 11-20.

LEARNING CURVE

Now the children have learned to count up to 10, they can learn to count upwards from 11 to 20.

LEARNING AIDS

Coloured beads, small trays, and thread

LEARNING ACTIVITY (30 MINUTES)

Step 1. Count out 10 beads and string them on the thread. The children should count along as well.

Step 2. Next, take a single bead out of the container and place it next to the string. Ask the children to count the beads.
Step 3. Introduce the concept that one more than ten is eleven.
Step 4. Trace the number 11 in the air by following the number written on page 60 of the book.
Step 5. In a similar manner, teach the numbers up to 20.

CLASSROOM ORGANIZATION (10 MINUTES)

Place 10 trays on the table and ask the children to take out beads from the container and place them in the trays. Each tray should have a different number of beads from 11 to 20. You can assign each student a specific number of beads to place in his or her tray, e.g. Child A may be required to place 14 beads in her tray while Child B may be asked to place 17 beads in his.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the numbers 11-20.

LEARNING CURVE

Now the children have learned to count up to 10, they can learn to count upwards from 11 to 20.

TEXTBOOK EXERCISE (40 MINUTES)

Pages 60-63

Step 1. Revise the concepts of the previous lesson and introduce the formation of numbers 11-20 on pages 60 and 61 of the textbook.
Step 2. Count with the children and trace each number in the air before progressing to the next.
Step 3. The children should be asked to trace the numbers 11 to 20 on pages 62 and 63.

Unit 11: Numbers 21 to 30

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the numbers 21-30.

LEARNING CURVE

Now the children have learned to count up to 20, they can learnt to count upwards from 21 to 30.

LEARNING AIDS

Seashells and small trays

LEARNING ACTIVITY (30 MINUTES)

Step 1. Count out 20 beads and place them in a separate tray or box. Label the box with the number 20. The children should count along as well.
Step 2. Next, take a single shell out of the container and place it next to the box of 20 shells. Ask the children to count the shells.
Step 3. Introduce the concept that one more than twenty is twenty-one.
Step 4. Trace the number 21 in the air by following the number written on page 64 of the book.
Step 5. In a similar manner, teach the numbers up to 30.

CLASSROOM ORGANIZATION (10 MINUTES)

Place 10 trays on the table and ask the children to take out shells from the container and place them in the trays. Each tray should have a different number of shells from 21 to 30. You can assign each child a specific number of beads to place in his or her tray, e.g. Child A may be required to place 23 beads in her tray while Child B may be asked to place 25 beads in his.

LESSON 2

OBJECTIVE

By the end of this lesson,the children should be able to recognize and write the numbers 21-30.

LEARNING CURVE

Now the children have learned to count up to 20, they can learn to count upwards from 21 to 30.

TEXTBOOK EXERCISE (40 MINUTES)

Pages 64-67

Step 1. Revise the concepts of the previous lesson and introduce the formation of numbers 21-30 on pages 64 and 65 of the textbook.
Step 2. Count with the children and trace each number in the air before progressing to the next.
Step 3. The children should be asked to trace the numbers 21 to 30 on pages 66 and 67. Any remaining tracing may be assigned as homework or completed in the next lesson.

Unit 12: Numbers 31 to 40

LESSON 1

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the numbers 31-40.

LEARNING CURVE

Now the children have learned to count up to 30, they can learn to count upwards from 31 to 40.

LEARNING AIDS

Building blocks

LEARNING ACTIVITY (30 MINUTES)

Step 1. Count out 30 building blocks and stack them in columns of 10. The children should count along as well.
Step 2. Next, take a single block out of the container and place it next to the towers. Ask the children to count the blocks.
Step 3. Introduce the concept that one more than thirty is thirty-one.
Step 4. Trace the number 31 in the air by following the number written on page 68 of the book.
Step 5. In a similar manner, teach the numbers up to 40.

CLASSROOM ORGANIZATION (10 MINUTES)

Ask each child to build stacks of blocks of different numbers from 31 to 40. Assign each child a different number of blocks to build towers with, e.g. Child A may be required to build stacks using 35 blocks while Child B may be asked to build stacks with 33 blocks.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the numbers 31-40.

LEARNING CURVE

Now the children have learned to count up to 30, they can learn to count upwards from 31 to 40.

TEXTBOOK EXERCISE (40 MINUTES)

Pages 68-71

Step 1. Revise the concepts of the previous lesson and introduce the formation of numbers 31-40 on pages 68 and 69 of the textbook.
Step 2. Count with the children and trace each number in the air before progressing to the next.
Step 3. The children should be asked to trace the numbers 31 to 40 on pages 70 and 71. Any remaining tracing may be assigned as homework or completed in the next lesson.

Unit 13: Numbers 41 to 50

LESSON 1

OBJECTIVE

By the end of this lesson,the children should be able to recognize and write the numbers 41-50.

LEARNING CURVE

Now the children have learned to count up to 40, they can learn to count upwards from 41 to 50.

LEARNING AIDS

Stickers of stars

LEARNING ACTIVITY (30 MINUTES)

Step 1. Count out 40 stickers and stick them in rows of 10. The children should count along as well.
Step 2. Next, take a single sticker out of the pack and begin a new row with it. Ask the children to count the stars.
Step 3. Introduce the concept that one more than forty is forty-one.
Step 4. Trace the number 41 in the air by following the number written on page 72 of the book.
Step 5. In a similar manner, teach the numbers up to 50.

CLASSROOM ORGANIZATION (10 MINUTES)

Ask each child to make rows of stars using a different number of stickers from 41 to 50. Assign each child a different number of stars to make rows with.

LESSON 2

OBJECTIVE

By the end of this lesson, the children should be able to recognize and write the numbers 41-50.

LEARNING CURVE

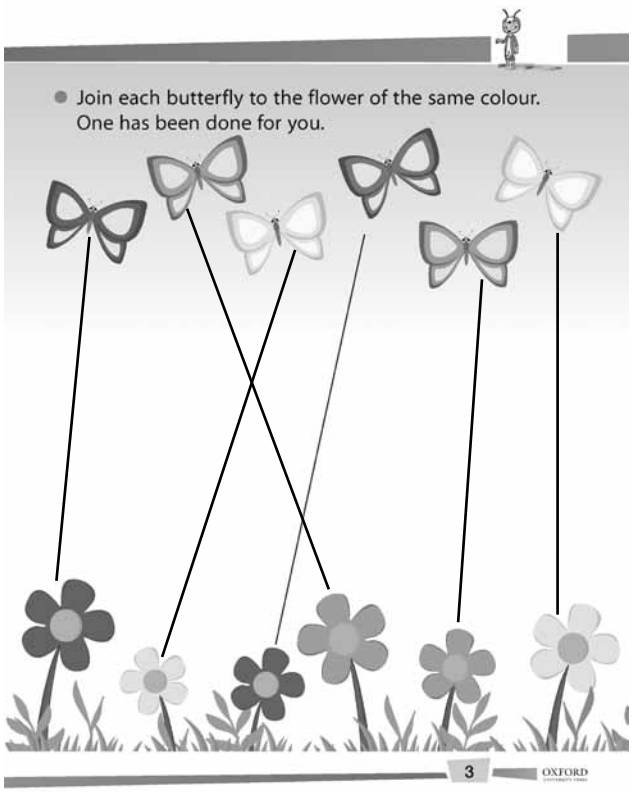
Now the children have learned to count up to 40, they can learn to count upwards from 41 to 50.

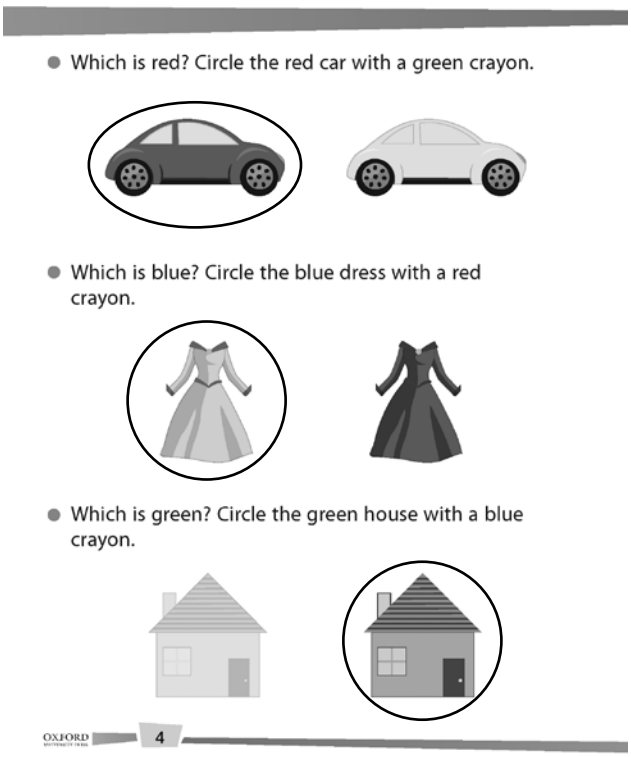
TEXTBOOK EXERCISE (40 MINUTES)

Pages 74-75

Step 1. Revise the concepts of the previous lesson and introduce the formation of numbers 41-50 on pages 72 and 73 of the textbook.
Step 2. Count with the children and trace each number in the air before progressing to the next.
Step 3. The children should be asked to trace the numbers 41 to 50 on pages 74 and 75. Any remaining tracing may be assigned as homework or completed in the next lesson.

ANSWERS

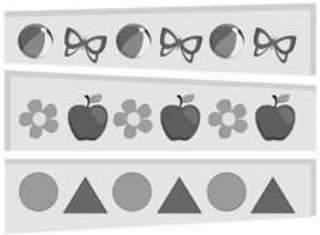




Unit 5

Patterns

- Look at the patterns.



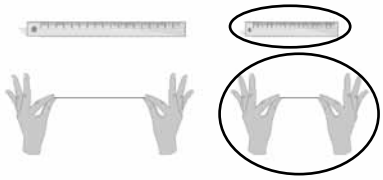
- Draw a line from the correct shape to the blank square.

13

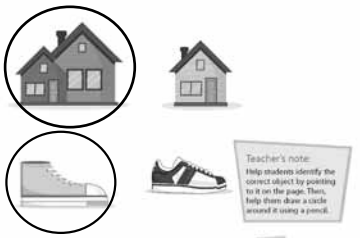
- Draw and complete the patterns.

14

- Circle the short object.



- Circle the big object.

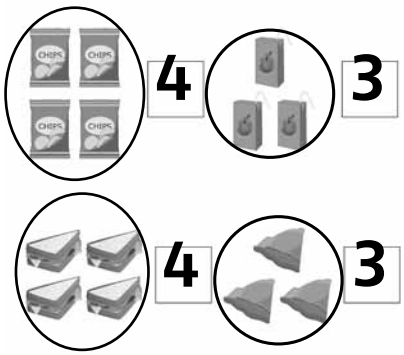


Teacher's note: Help students identify the correct object by pointing to it on the page. Then, help them draw a circle around it using a pencil.

17

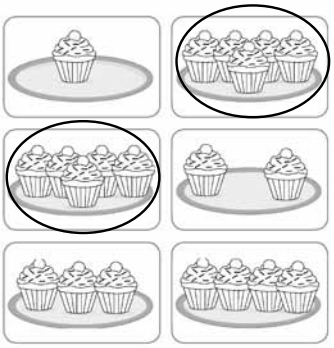
- Draw an oval around the objects in sets of four. Write the number in the box.

  Draw a circle around the objects in sets of three. Write the number in the box.

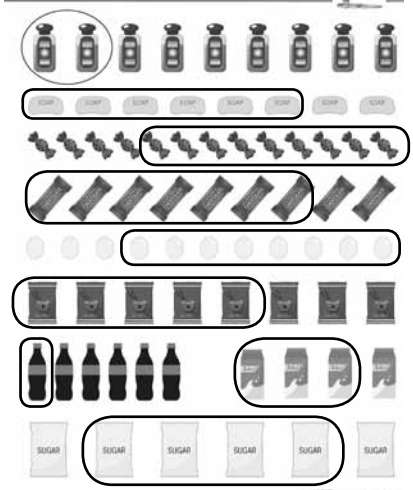


29

- Draw a circle around the trays which have five cupcakes. Colour each cupcake a different colour.

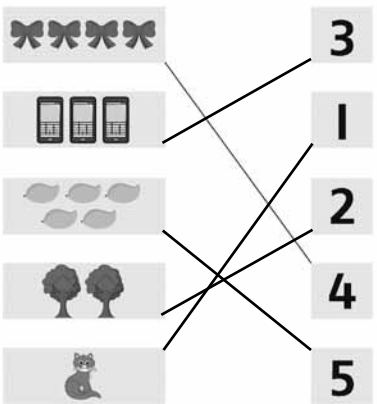


32



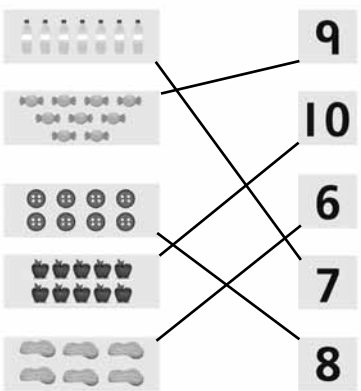
51

- Draw lines to match.



56

- Draw lines to match.



57

Page 34

How many red kites? 4; How many red balloons? 3; How many green kites? 1; How many blue kites? 2; How many yellow balloons? 5

Page 40

Answers from top to bottom along the column: blue 6, yellow 5, blue 6, yellow 5, blue 6, yellow 5

Page 43

hens 6, flying pigeons 2, pigeon on grass 3

Page 47

Answers from top to bottom: 8, 7, 5, 3, 2, 1, 4, 6

Page 53

How many? 5 How many? 0

Page 58

What comes after?

1 2 3 [4]

2 3 4 [5]

5 6 7 [8]

What comes in between?

2 [3] 4

5 [6] 7

7 [8] 9

What comes before?

[0] 1 2

[4] 5 6

[8] 9 10

Page 76

Look at the earlier pages if you wish to. Write the correct numbers in the blank lines.

10 11 12 13 14 14

16 17 18 19 20

21 22 23 24 25

26 27 28 29 30

31 32 33 34 35

36 37 38 39 40

41 42 43 44 45

46 47 48 49 50

COLOURS

Colour the names with the correct colour.

blue

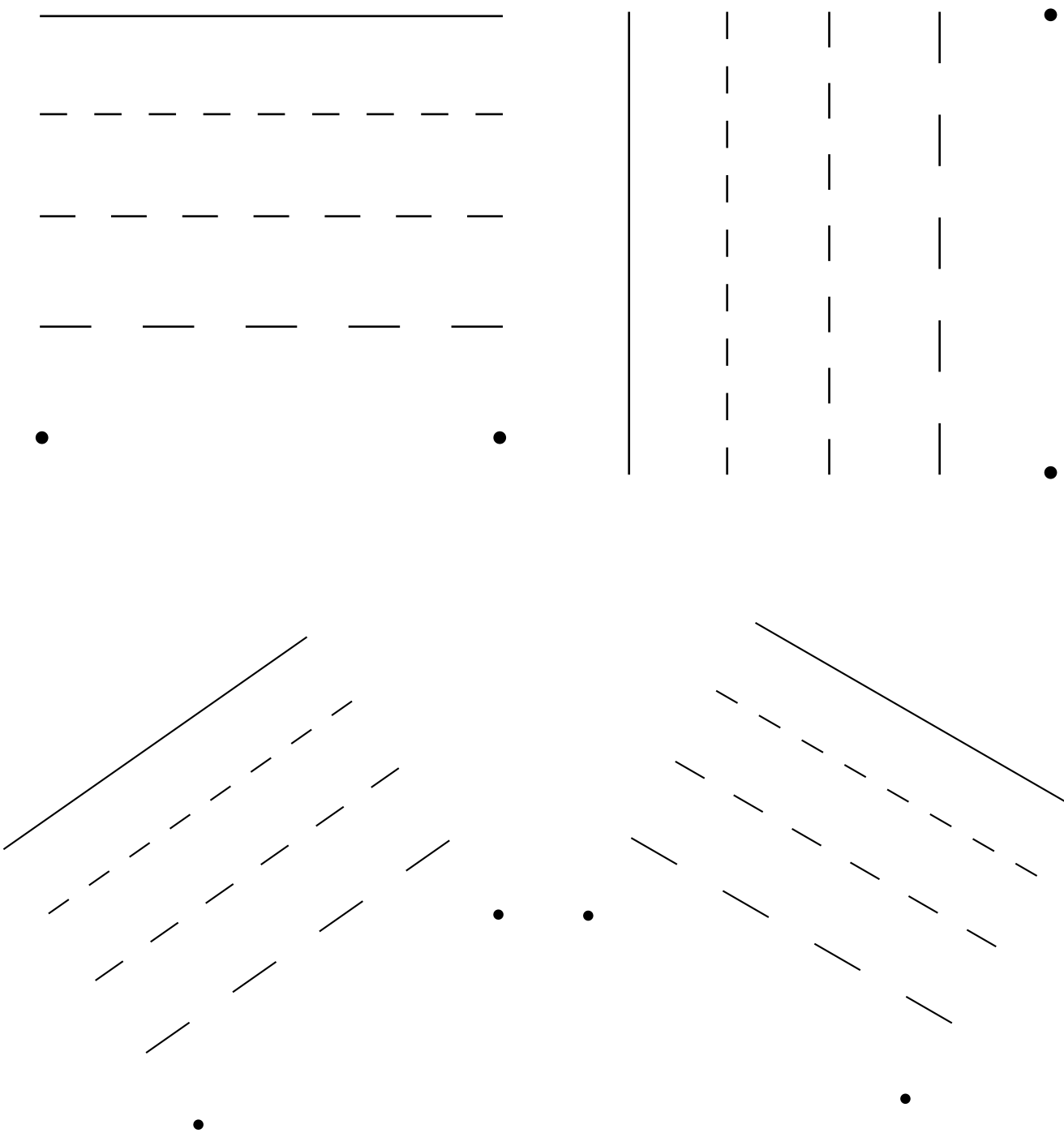
red

yellow

green

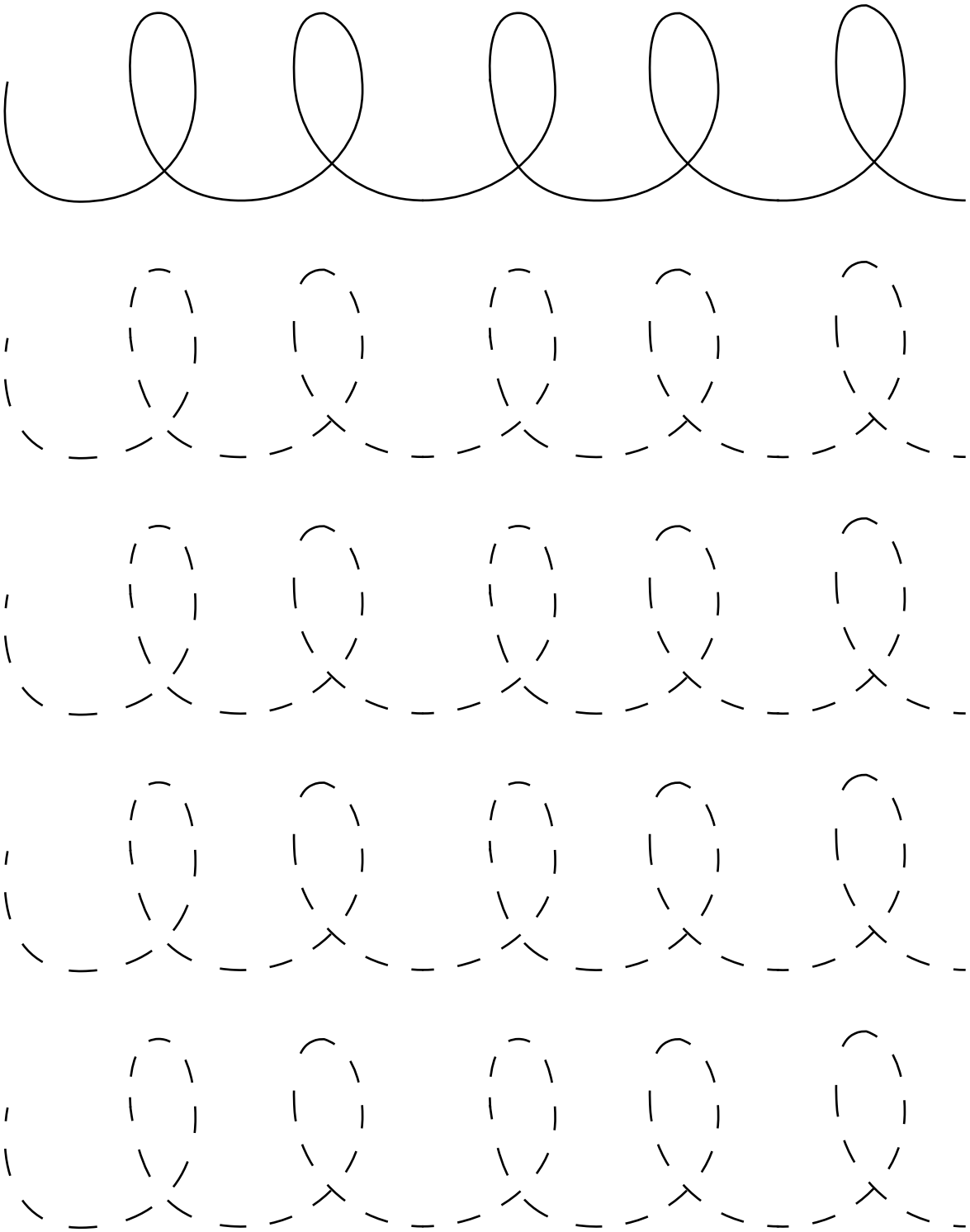
STRAIGHT LINES

Draw straight lines by joining the marks.



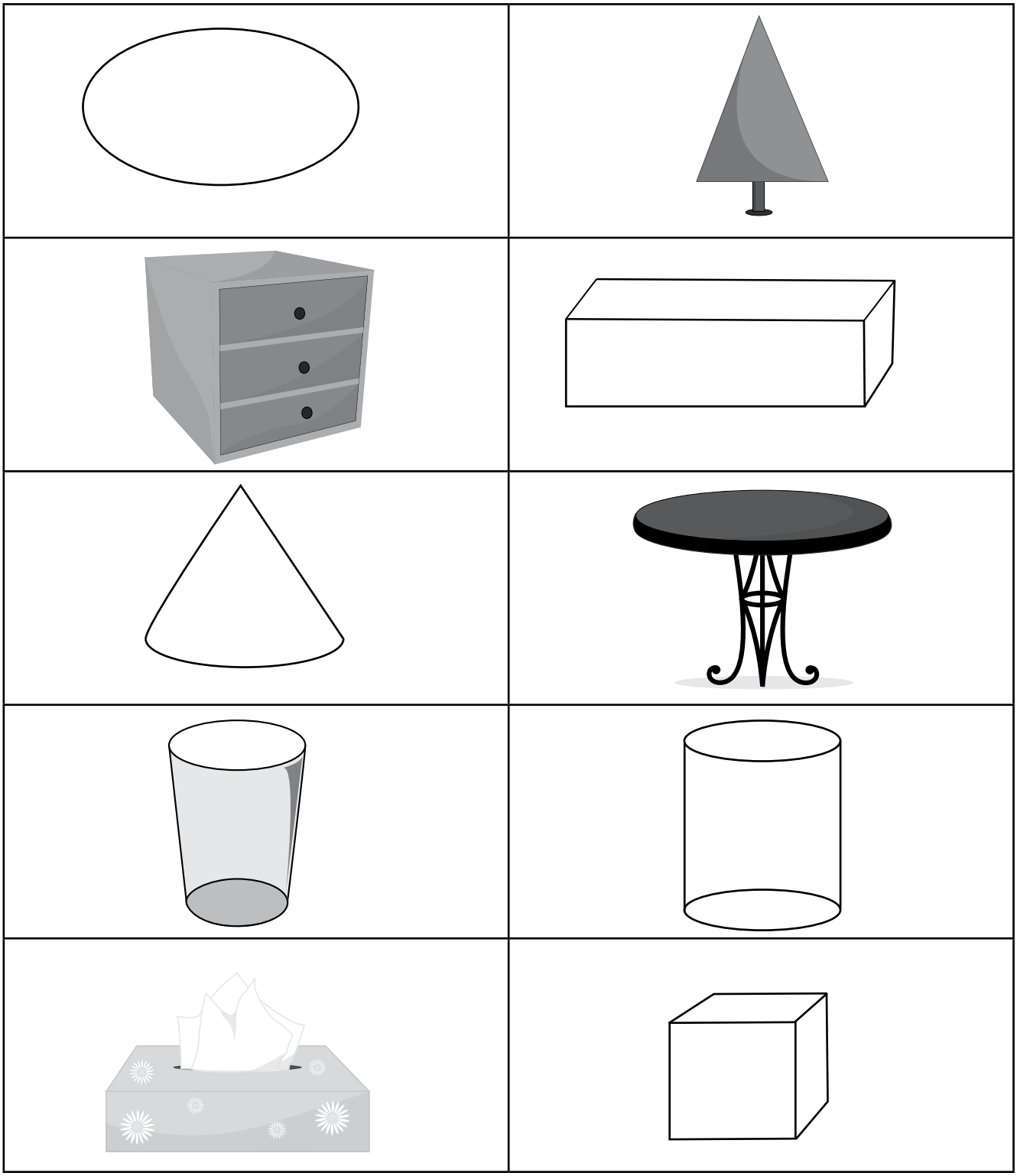
CURVED LINES

Draw curved lines by joining the marks.



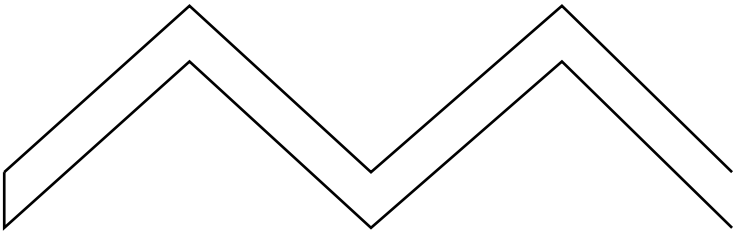
SHAPES

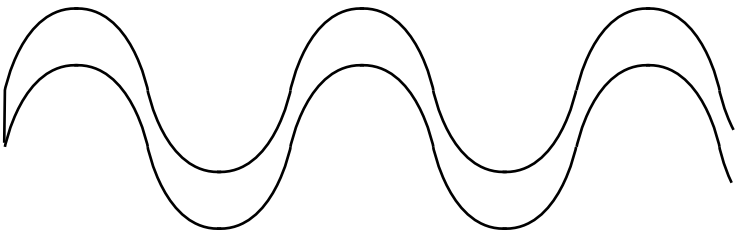
Draw a line to match the object to its shape.

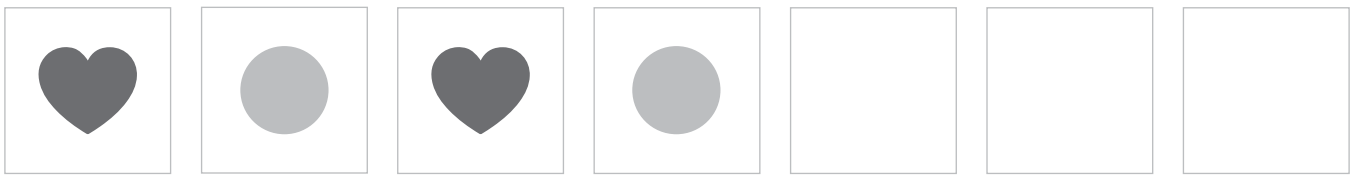


PATTERNS

Complete the patterns. Colour them.

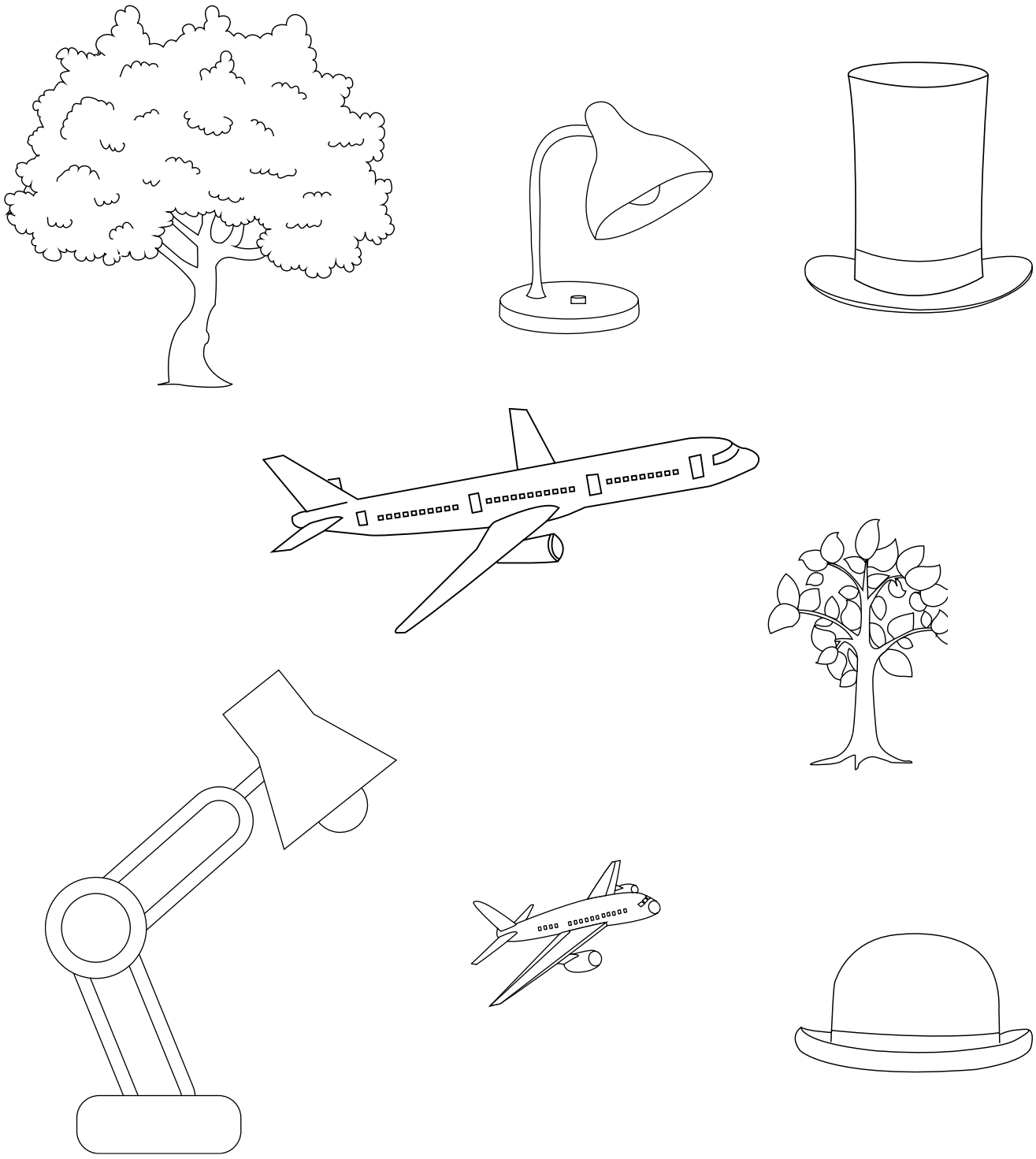






SIZE

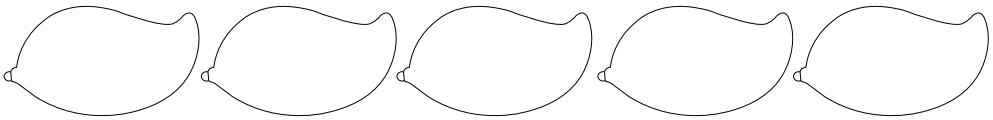
Draw a line to join the big object to the matching small object.
Colour the objects.



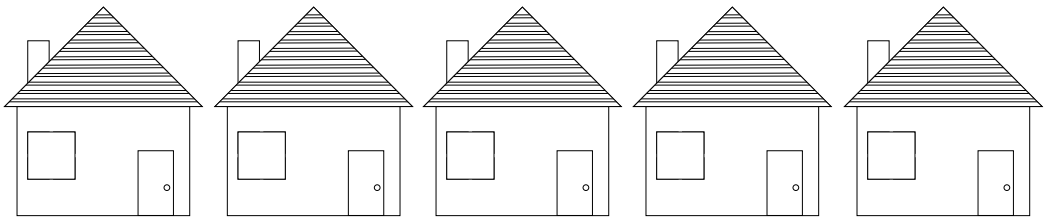
NUMBERS 1-5

Colour all the objects. Circle the given number of objects in each line.

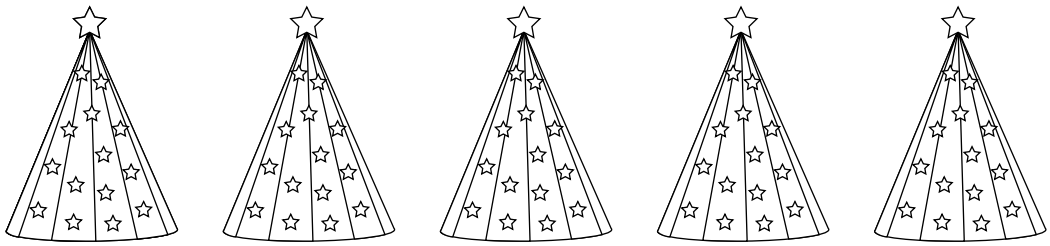
1



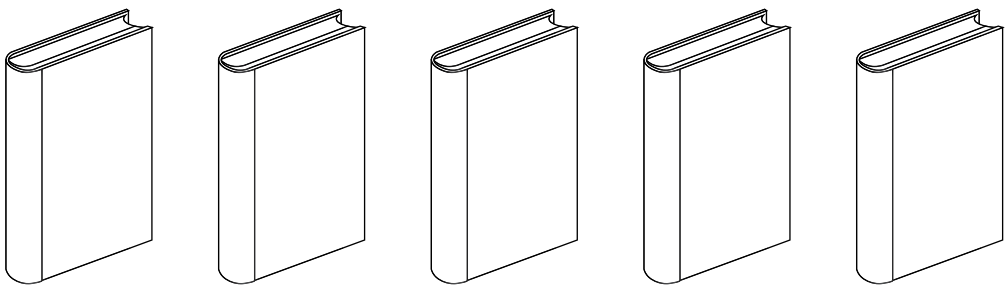
3



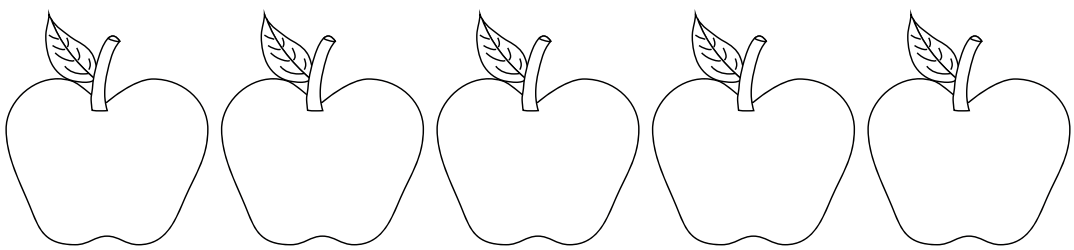
4



5

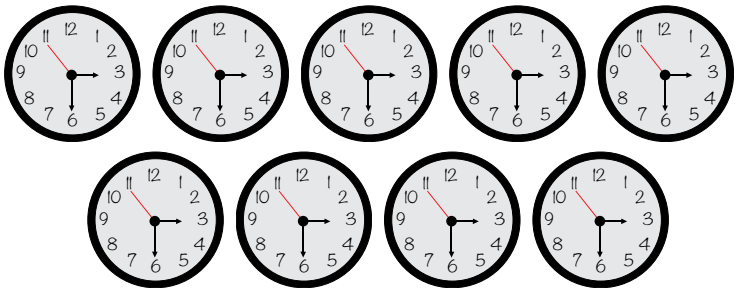


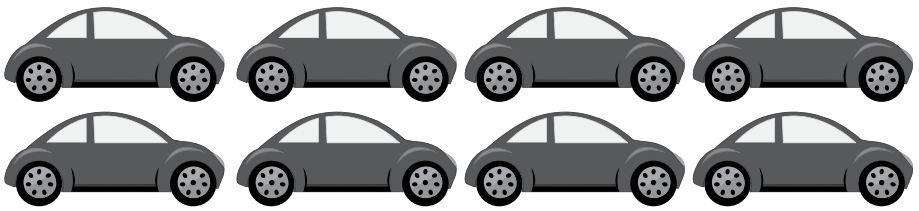
2

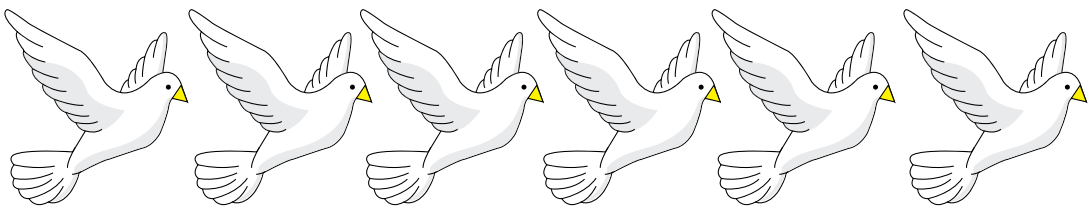


NUMBERS 6-10

Write the correct number in each box.







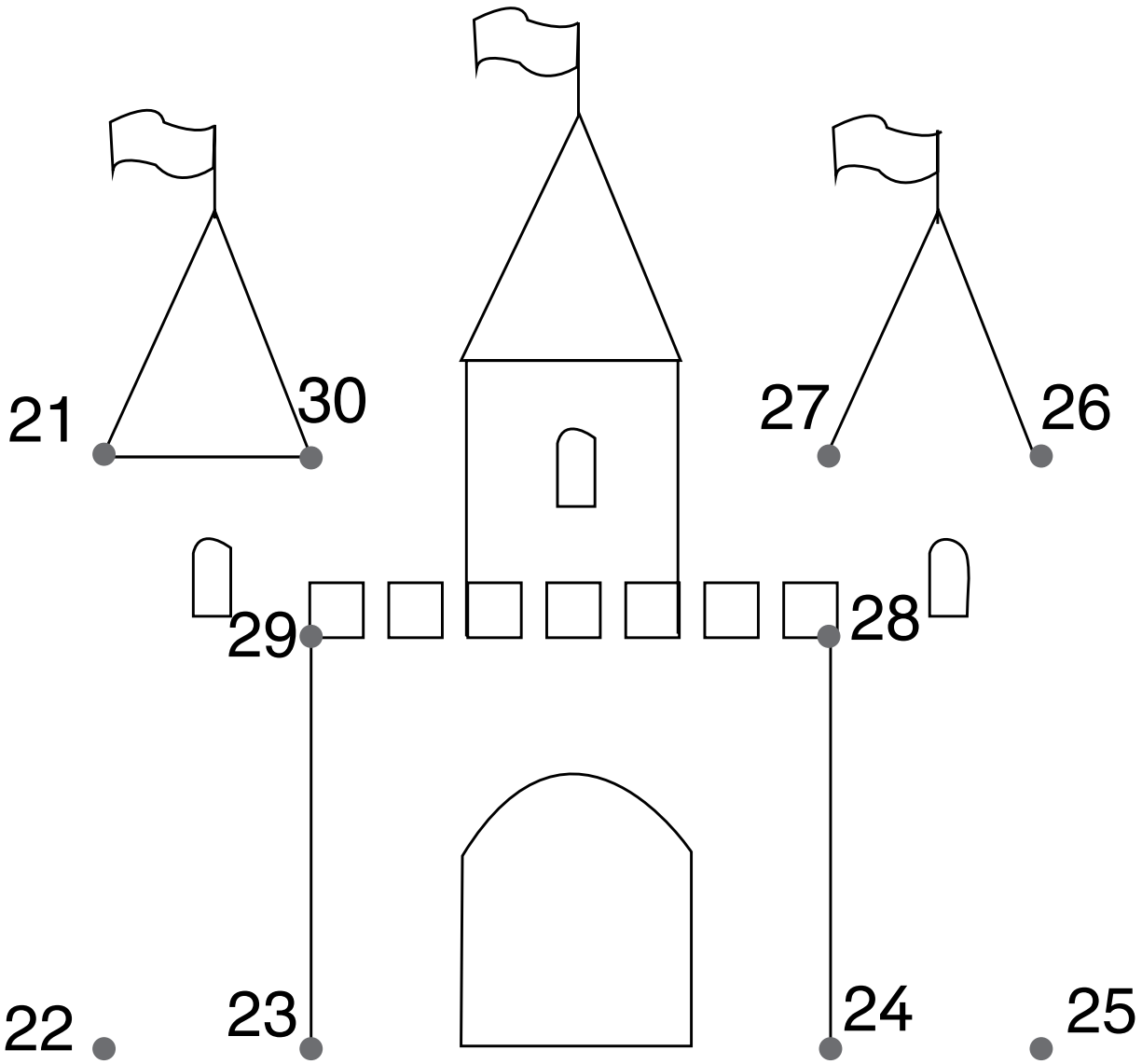
NUMBERS 11-20

Colour the boxes in the correct order from 11 to 20. The first two have been done for you.

11	14	13	15	12
10	11	19	13	17
12	14	18	17	15
14	12	19	16	13
15	17	12	18	12
16	19	17	15	20

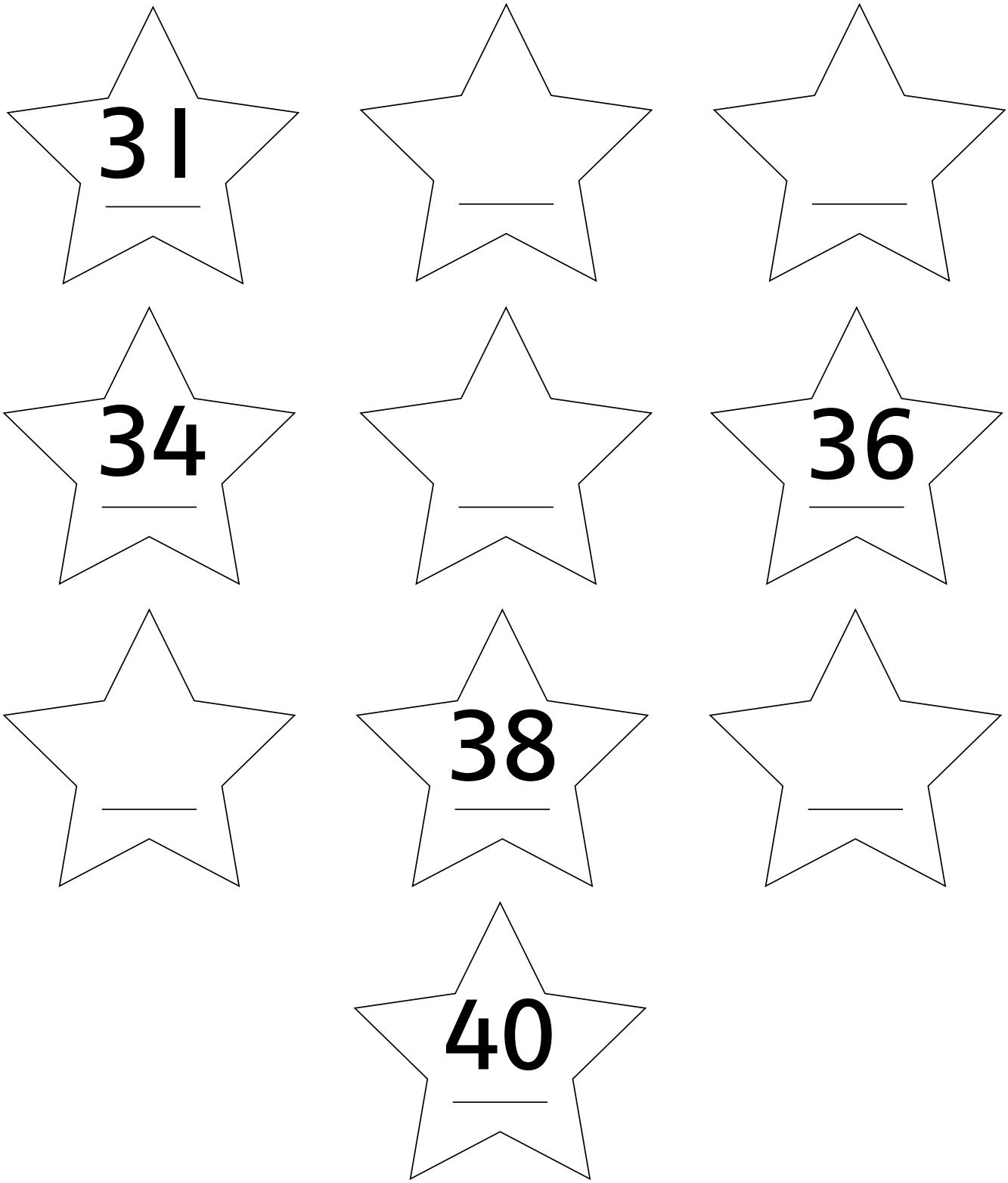
NUMBERS 21-30

Join the dots from 21 to 30 to complete the picture. Colour the completed picture.



NUMBERS 31-40

Fill in the missing numbers from 31 to 40.



NUMBERS 41-50

Draw a line to join the numbers in the correct order.