

Mathematics!



A Story of Units Parent Handbook

**GRADE 1
MODULE 5**

Identifying, Composing, and Partitioning Shapes

OVERVIEW

Throughout the year, students have explored part–whole relationships in many ways, such as their work with number bonds, tape diagrams, and their relationship to addition and subtraction. In Module 5, students consider part–whole relationships through a geometric lens.

In Topic A, students identify the defining parts, or attributes, of two- and three-dimensional shapes, building on their kindergarten experiences of sorting, analyzing, comparing, and creating various two- and three-dimensional shapes and objects. Using straws, students begin the exploration by creating and describing two-dimensional shapes without naming them. This encourages students to attend to and clarify a shape’s defining attributes. In the following lessons, students name two- and three-dimensional shapes and find them in pictures and in their environment. New shape names are added to students’ repertoire, including *trapezoid*, *rhombus*, *cone*, and *rectangular prism*.

In Topic B, students combine these shapes to create a new whole: a composite shape. Students identify the name of the composite shape as well as the names of each shape that forms it. Students see that another shape can be added to a composite shape so that the composite shape becomes part of an even larger whole.

During Topic C, students relate geometric figures to equal parts and name the parts as halves and fourths (or quarters). For example, students now see that a rectangle can be partitioned into two equal triangles (whole to part) and that the same triangles can be recomposed to form the original rectangle (part to whole). Students see that as they create more parts, decomposing the shares from halves to fourths, the parts get smaller.

The module closes with Topic D, in which students apply their understanding of halves to tell time to the hour and half hour. Students will construct simple clocks and begin to understand the hour hand, then the minute hand, then both together. Throughout each lesson, students read both digital and analog clocks to tell time.

Throughout Module 5, students continue daily fluency with addition and subtraction, preparing for Module 6, in which they will be adding within 100, and assuring their mastery of the grade level fluency goal of sums and differences within 10.

Terminology

New or Recently Introduced Terms

Attributes (characteristics of an object such as color or number of sides)

Fourth of (shapes), fourths (1 out of 4 equal parts)

Half of, halves (1 out of 2 equal parts)

Half past (expression for 30 minutes past a given hour)

Half-hour (interval of time lasting 30 minutes)

Hour (unit for measuring time, equivalent to 60 minutes or $1/24$ of a day)

Minute (unit for measuring time, equivalent to 60 seconds, $1/60$ of an hour)

O'clock (used to indicate time to a precise hour, with no additional minutes)

Quarter of (shapes) (1 out of 4 equal parts)

Three-dimensional shapes:

Cone

Cube

Cylinder

Rectangular prism

Sphere

Two-dimensional shapes:

Circle

Half-circle

Quarter-circle

Hexagon (flat figure enclosed by six straight sides)

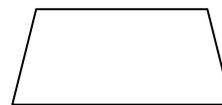
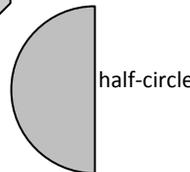
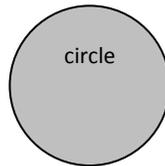
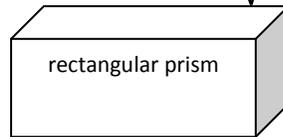
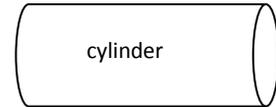
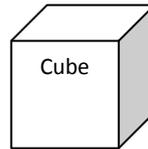
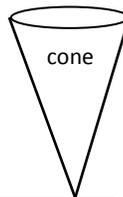
Rectangle (flat figure enclosed by four straight sides and four right angles)

Rhombus (flat figure enclosed by four straight sides of the same length where two pairs of opposite sides are parallel)

Square (rectangle with four sides of the same length)

Trapezoid

Triangle (flat figure enclosed by three straight sides)



Familiar Terms and Symbols

Clock

Shape names from kindergarten: circle, square, rectangle, triangle, hexagon, sphere, cylinder, and cube

Suggested Tools and Representations

Pattern blocks

Square tiles

Straws

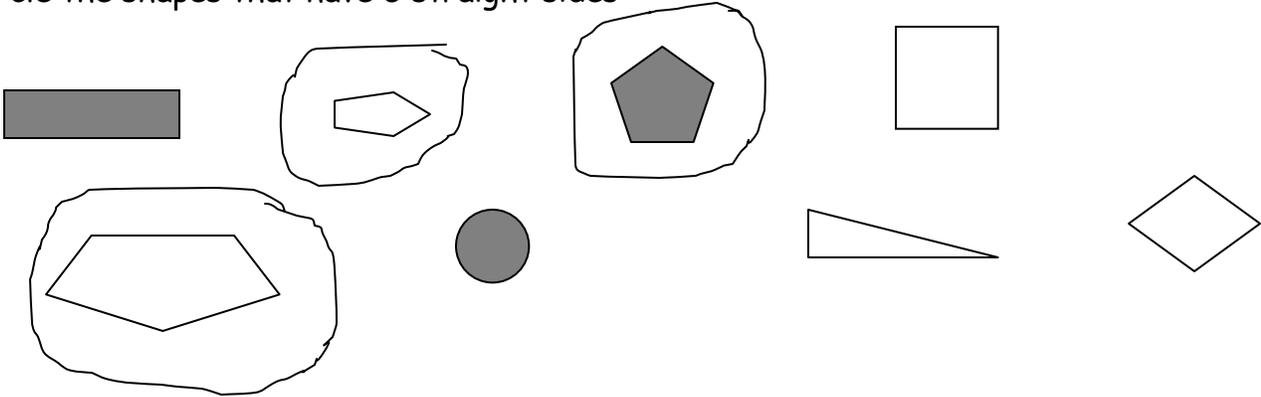
Student clocks, preferably with gears that can provide the appropriate hour-hand alignment

Three-dimensional shape models (commercially produced or commonly found examples) including cube, cone, cylinder, rectangular prism, and sphere

Lesson 1

Objective: Classify shapes based on defining attributes using examples, variants, and non-examples.

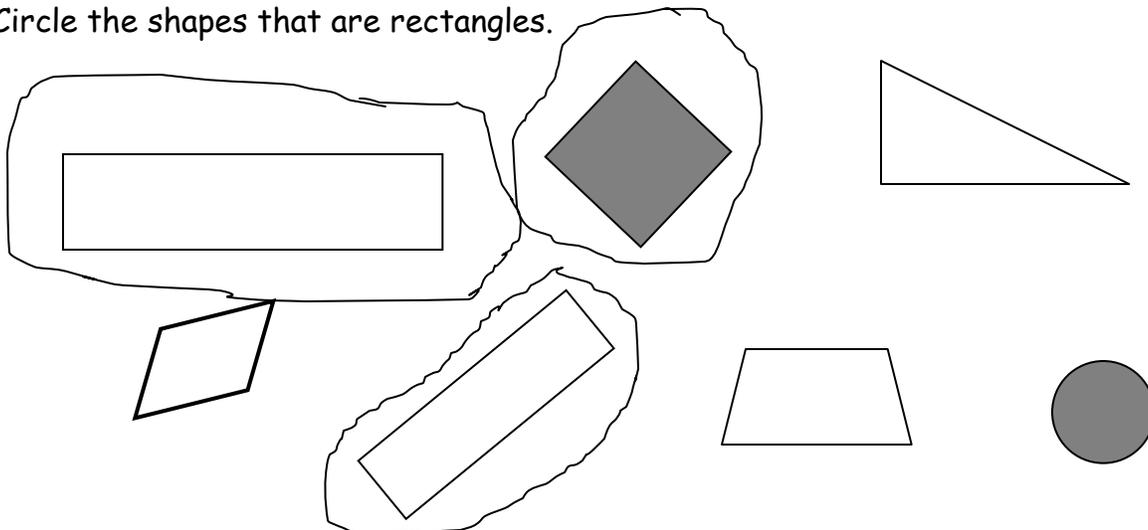
Circle the shapes that have 5 straight sides



Lesson 2

Objective: Find and name two-dimensional shapes including trapezoid, rhombus, and a square as a special rectangle, based on defining attributes of sides and corners.

Circle the shapes that are rectangles.



Note: A square is a special rectangle.

Lesson 3

Objective: Find and name three-dimensional shapes including cone and rectangular prism, based on defining attributes of faces and points.

Write the name of each object in the correct column.

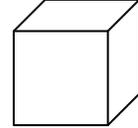


dice



globe

block



tennis ball



can



tissue box



party hat

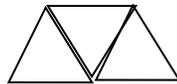
Cubes	Spheres	Cones	Rectangular Prisms	Cylinders
dice block	Tennis ball globe	Party hat	Tissue box	can

Lesson 4

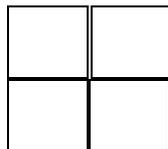
Objective: Create composite shapes from two-dimensional shapes.

Use pattern blocks to create the following shapes. Trace or draw to record your work.

Use 3 triangles to make 1 trapezoid



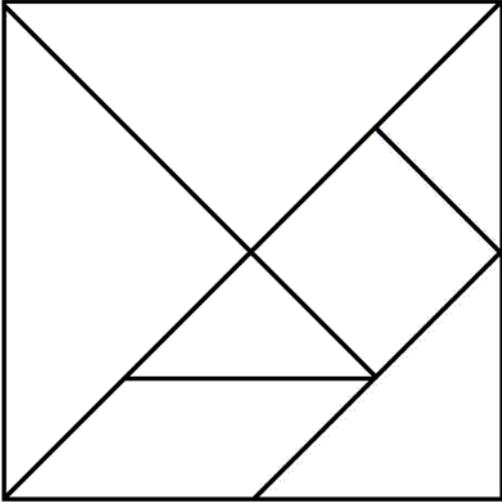
Use 4 squares to make 1 larger square.



Lesson 5

Objective: Compose a new shape from composite shapes.

How many shapes were used to make this large square? 7



What are the names of the 3 types of shapes used to make the large square?

Triangle, square, parallelogram

Lesson 6

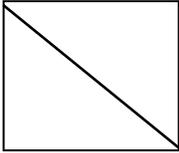
Objective: Create a composite shape from three-dimensional shapes and describe the shape using shape names and positions.

Individual creations will vary.

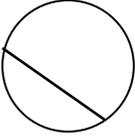
Lesson 7

Objective: Name and count shapes as part of a whole, recognizing relative sizes of the parts.

Are the shapes divided into equal parts? Write **Y** for yes or **N** for no. If the shape has equal parts, write how many equal parts on the line. The first one has been done for you.

a. 

 y 2

b. 

 n

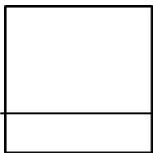
d. 

 y 4

Lesson 8

Objective: Partition shapes and identify halves and quarters of circles and rectangles.

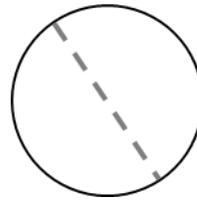
Are the shapes divided into halves? Write yes or no.



no



no

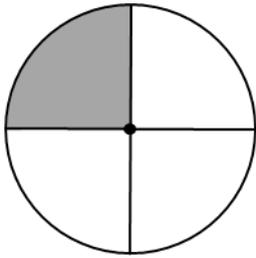


yes

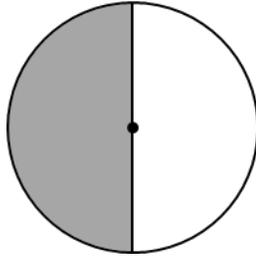
Lesson 9

Objective: Partition shapes and identify halves and quarters of circles and rectangles.

Label the shaded part of each picture as one half of the shape or one quarter of the shape.



A



B

Which shape has been cut into more equal parts? A

Which shape has larger equal parts? B

Which shape has smaller equal parts? A

Lesson 10:

Objective: Construct a paper clock by partitioning a circle and tell time to the hour.

Match the clocks that show the same time.



1:00

5:00

12:00

8:00

Lesson 11:

Objective: Recognize halves within a circular clock face and tell time to the half hour.

Match the clocks to the times on the right.



Half past 5 o'clock



Five thirty

Two thirty

Lesson 12:

Objective: Recognize halves within a circular clock face and tell time to the half hour.

Fill in the blanks.



A

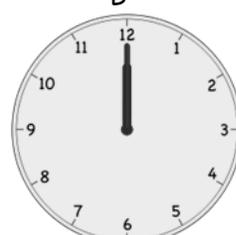


B

Clock A shows half past eleven



A



B

Clock A shows 6 o'clock.

Lesson 13:

Objective: Recognize halves within a circular clock face and tell time to the half hour.

Circle the correct clock. Write the times for the other two clocks on the lines.

Circle the clock that shows half past 1 o'clock.



_____ 1:00 _____

_____ 12:30 _____

Blank area for writing answers.