Unit 7

Geometry and Time

Essential Questions

- How can you describe and build shapes in your environment?
- How can you split shapes into equal parts?
- How can you use the positions of the hour and minute hands to tell time to the hour and half hour?

Unit Story: A Potluck for Pia

You can read the Unit Story with your student by visiting the Unit Story page on the Caregiver Hub.

LElik83/Shutterstock.com

Unit Investigation

Lesson 1 is the Unit Investigation. Students search for and describe three-dimensional shapes, or solid shapes, in their school environment to build curiosity and apply their own knowledge in a variety of ways. Use the **Caregiver Connection** to help students continue to explore the math they will see in the unit.

Caregiver Connection

Students may enjoy going on a shape hunt at home or in their community. Have students look out for solid shapes, such as cones, cubes, cylinders, and spheres.

You can ask:

- "How could you describe this shape?"
- "How are they the same? How are they different?"
- "What other objects have this same shape?"

Summary | Lesson 2

Solid shapes, such as **rectangular prisms** and **triangular prisms**, can be combined to build larger solid shapes and objects.

takasu/Shutterstock.com

Try This

1 Look at this Italian castle.
What solid shapes do you see?

Alessandro Colle/Shutterstock.com

2 Look at what Clare made.
What solid shapes do you see?

Alfa Photostudio/Shutterstock.com

Summary | Lesson 3

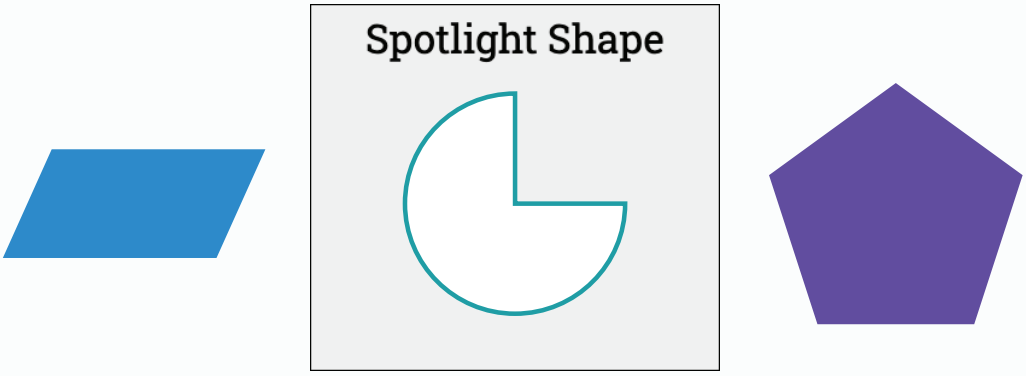
Flat shapes can be described, compared, and sorted based on their **attributes**.

All 3 shapes have straight sides.

These shapes each have 4 corners.

Try This

For Problems 1 and 2, look at the shapes placed around the spotlight shape.



1 What is **1** attribute the shapes have in common?

2 What is **1** attribute that the spotlight shape has that the other shapes do not have?

Summary | Lesson 4

Some attributes describe some triangles or rectangles.
Other attributes describe all triangles or rectangles.
All rectangles have 4 **square corners**.

Always true	Sometimes true	Never true
• Rectangles have 4 square corners. • Triangles have 3 sides.	• Triangles have a square corner. • Rectangles are green.	• Rectangles have 5 sides. • Squares have 1 curved side.

Try This

1 Han said that triangles are sometimes red.
Do you agree with him? Why or why not?

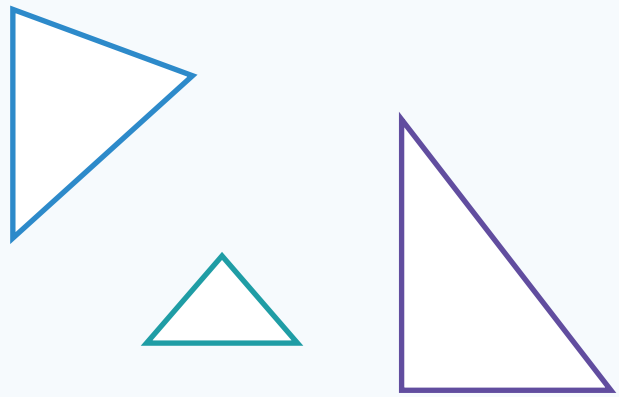
_____

_____

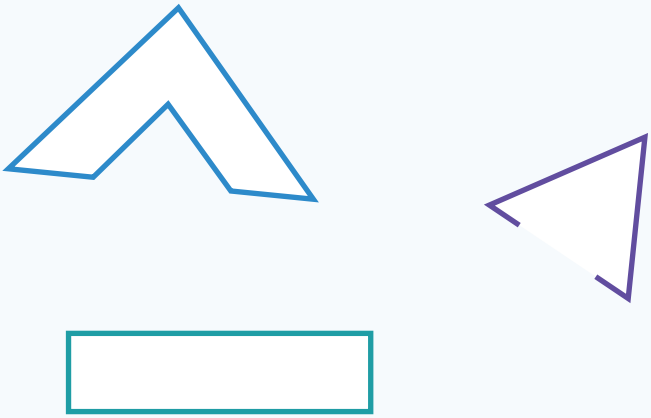
Summary | Lesson 5

Triangles have 3 straight sides. All the sides must touch to make 3 corners.

Triangles

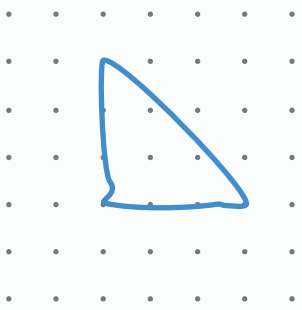


Not triangles



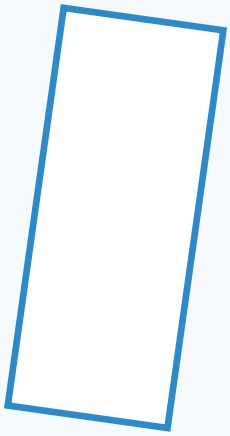
Try This

1 Jada drew this shape. Priya said it is not a triangle. Do you agree or disagree and why?

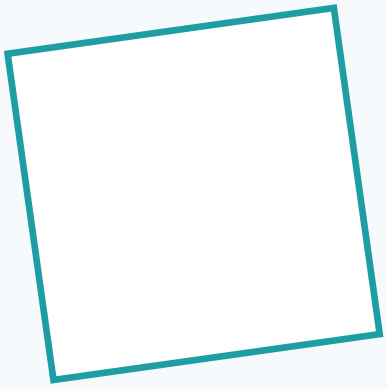


Summary | Lesson 6

Rectangles are shapes with 4 square corners and 4 sides that are touching. Squares are a type of rectangle with 4 sides that are the same length.



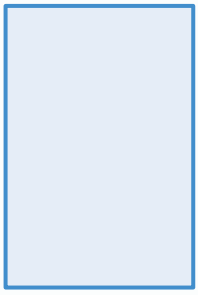
- **rectangle**



- **rectangle**
- **square**

Try This

For Problem 1, use the shape.



1 Is the shape a square? Why or why not?

_____

_____

Summary | Lesson 7

You can build the same shape in more than 1 way and name the shapes used to make it.

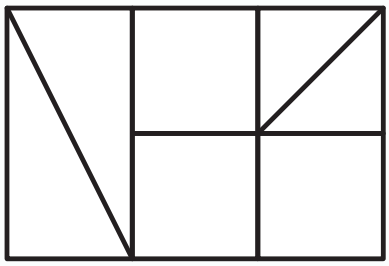
A trapezoid can be made with:

1 rhombus and 1 triangle

3 triangles

Try This

For Problems 1 and 2, use the shape.



1 How many squares can you count?

answer: _____

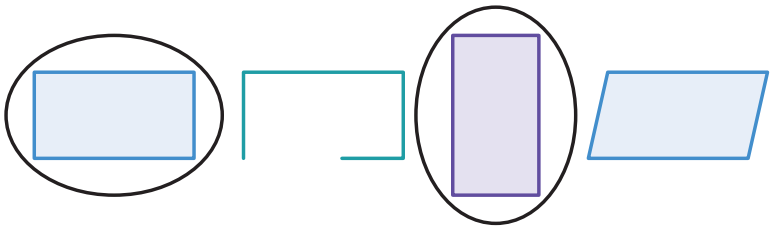
2 What did you look for to find the squares?

_____

_____

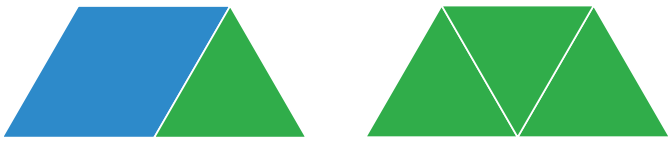
In this sub-unit . . .

- We found **attributes** that describe all triangles or rectangles, including squares.



Math tip: You can look at the number of sides or the number of corners of a shape to know what kind of shape it is.

- We made flat shapes using other flat shapes.



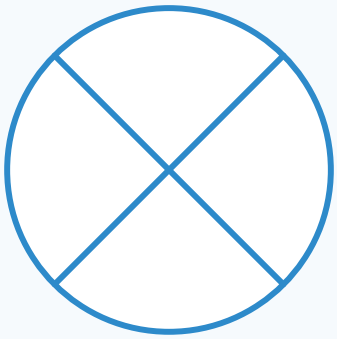
- We named the solid shapes used to build other solid shapes.

takasu/Shutterstock.com

We used cubes, cylinders, triangular prisms, and rectangular prisms to build a castle.

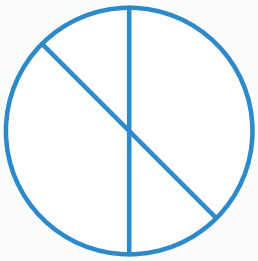
Summary | Lesson 8

When a shape is split into 4 equal parts, those parts are called **fourths**, or *quarters*.

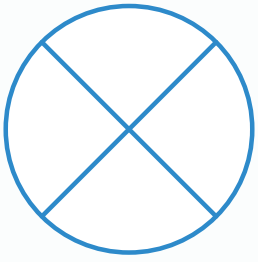


Try This

1 Tell if the circle is split into fourths and explain your thinking.



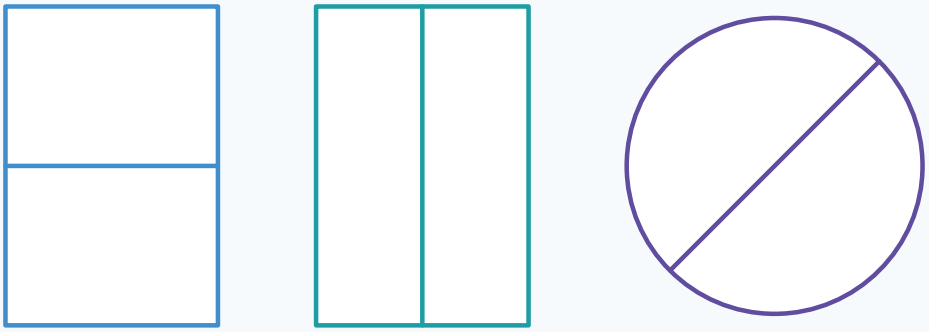
2 Tell if the circle is split into fourths and explain your thinking.



3 Circle **2** rectangles that are split into fourths.

Summary | Lesson 9

When a shape is split into 2 equal parts, those parts are called **halves**.

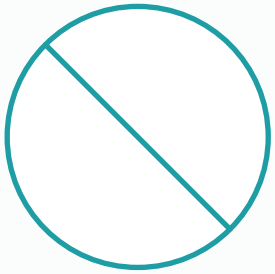


Try This

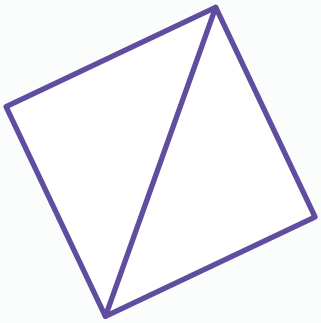
For Problems 1–3, circle to show if the shape is split into halves.

1

2

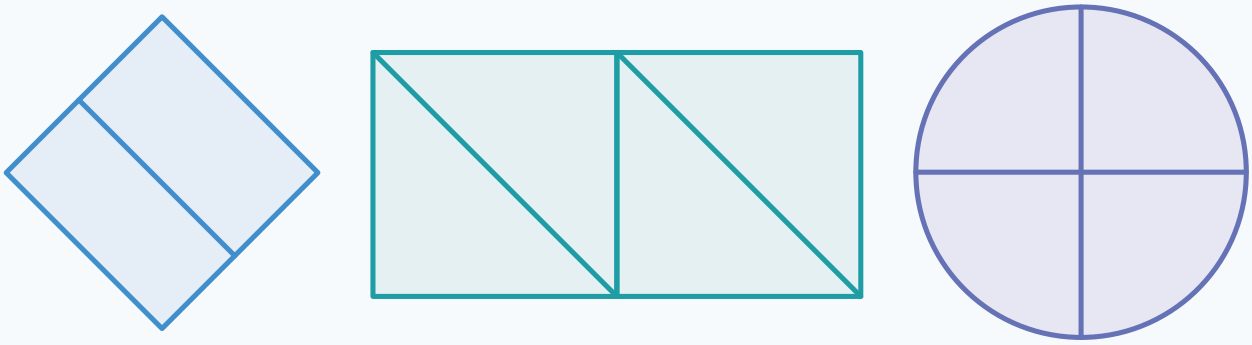


3



Summary | Lesson 10

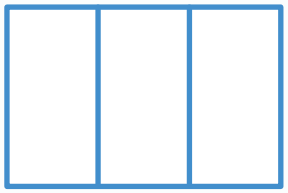
You can partition shapes into halves and fourths in different ways.



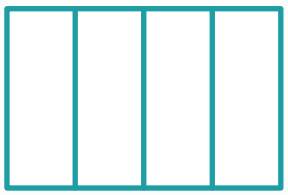
Try This

For Problems 1–3, write if the rectangle is split into *halves*, *fourths*, or *neither*.

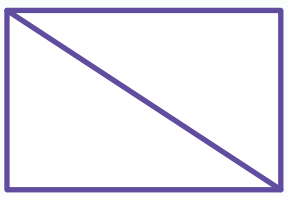
1



2



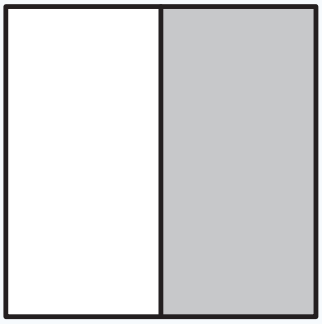
3



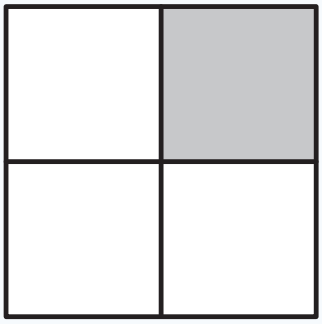
Summary | Lesson 11

You can name each equal part of a shape, and you can describe the whole shape as its number of equal parts.

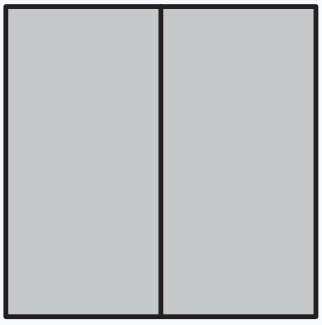
a half



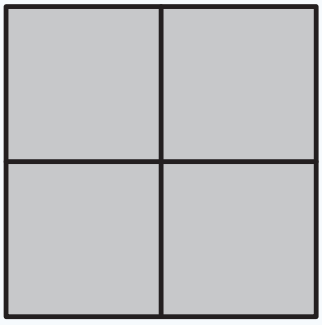
a fourth



2 of the halves

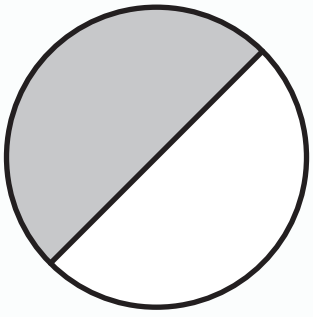


4 of the fourths



Try This

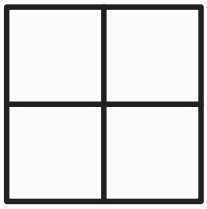
1 Write how much of the shape is shaded.



_____

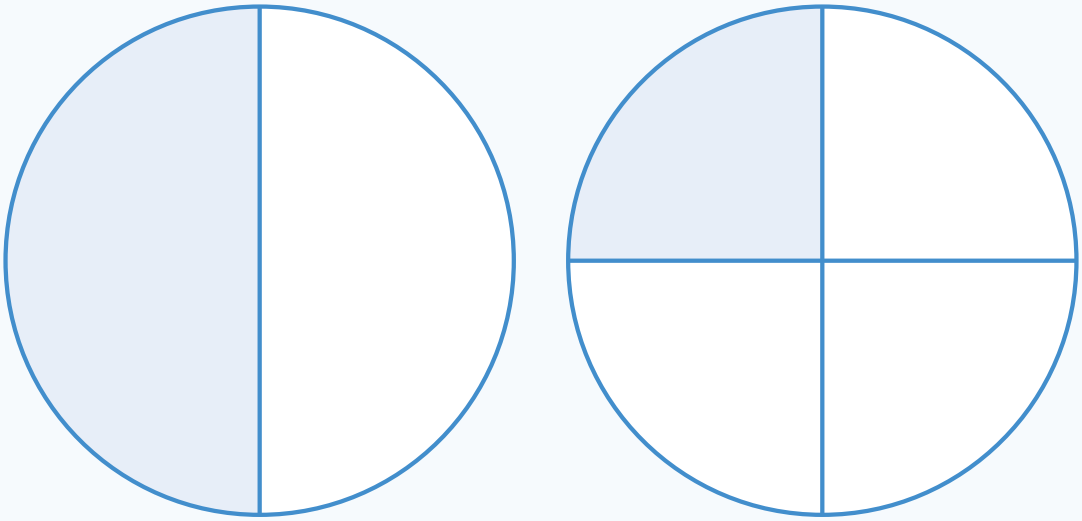
_____

2 Color **4** of the fourths of the square.



Summary | Lesson 12

Splitting the same shape into more equal parts creates smaller parts.

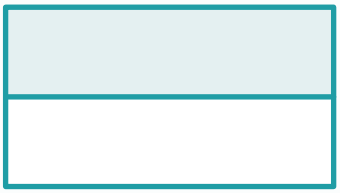


Try This

For Problems 1 and 2, write how much of the shape is shaded.

1

2



3 Look at Problems 1 and 2. Circle the shape that has the *greater* amount shaded.

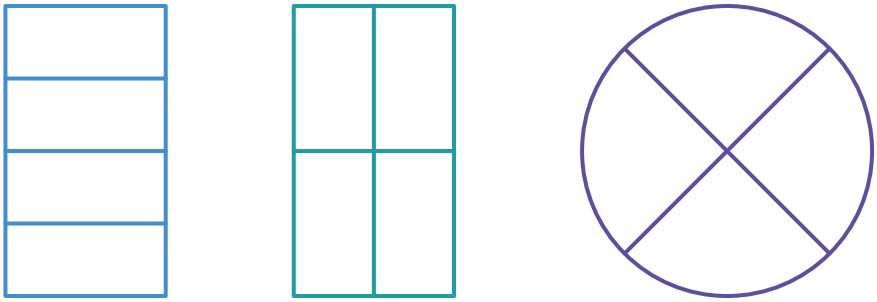
4 Circle which part of the same square is *greater*.

A half of the square

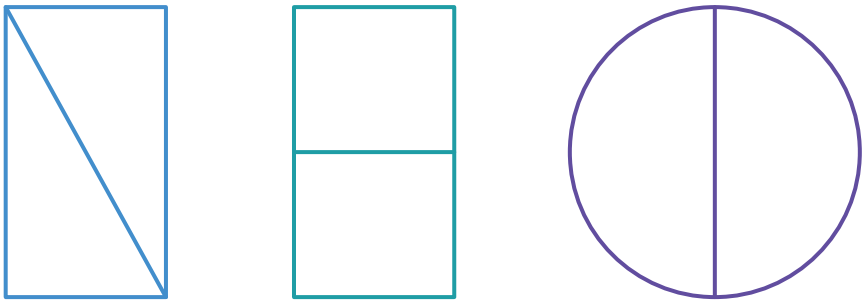
A fourth of the square

In this sub-unit . . .

- We split shapes into **fourths**, or *quarters*, in different ways.

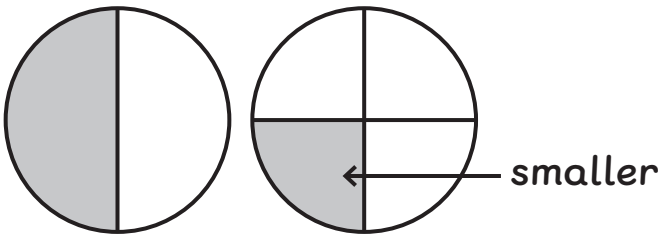


- We split shapes into **halves** in different ways.



Math tip: When shapes are split into halves or fourths, that means the shapes are split into equal parts.

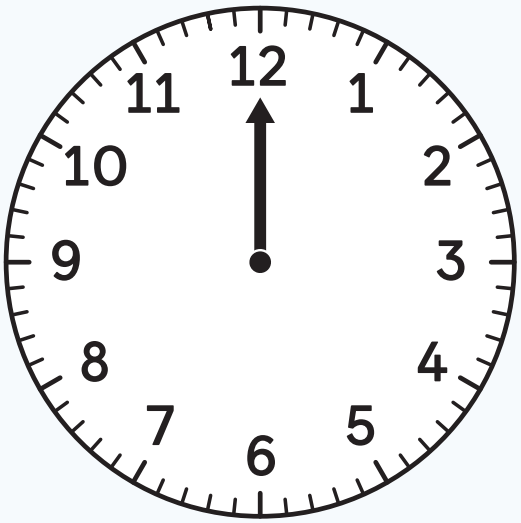
- We noticed that the more equal parts a shape is split into, the smaller those parts are.



A fourth of this circle is smaller than a half of this circle.

Summary | Lesson 13

On a clock with a face, the hour hand points directly to the number that tells the hour. When the **hour hand** points directly to 12, the time is 12 o'clock.

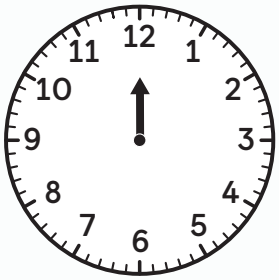


12:00

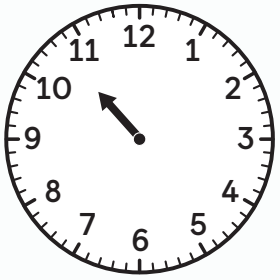
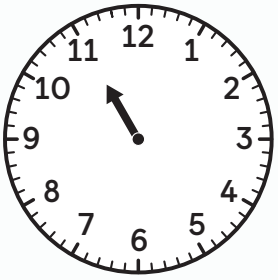
Try This

1 Circle the clock that shows 7 o'clock.



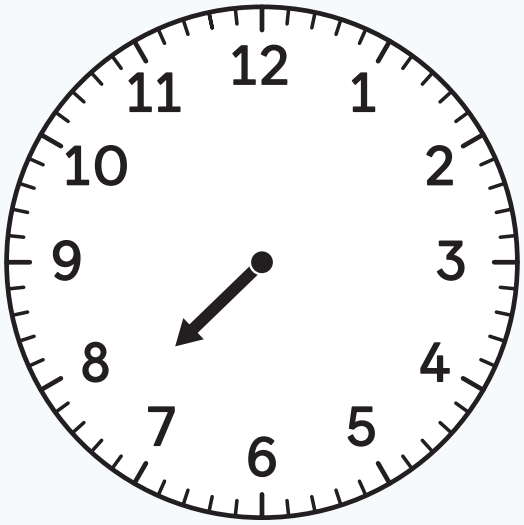


2 Circle the clock that shows 11:00.

Summary | Lesson 14

At **half past** the hour, the hour hand is halfway between that hour and the next hour.



half past 7

Try This

For Problems 1 and 2, fill in the number to complete the time.

1 half past _____

2 half past _____

Summary | Lesson 15

The **minute hand** is longer than the hour hand. It points straight up for times on the hour and points straight down for times half past the hour.

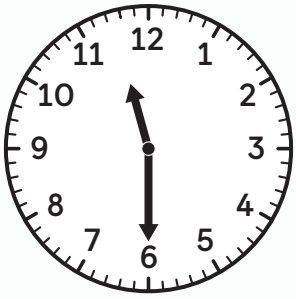
4 o'clock

half past 4

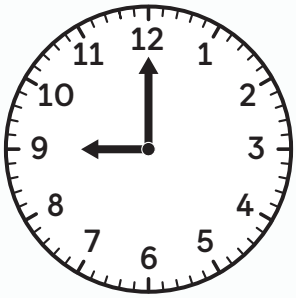
Try This

For Problems 1 and 2, write the time.

1

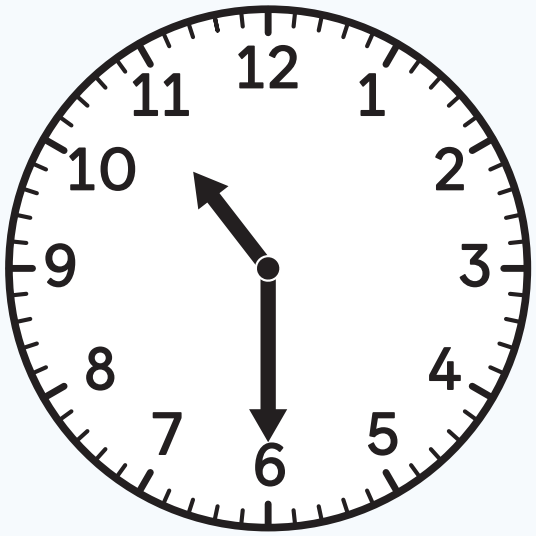


2



Summary | Lesson 16

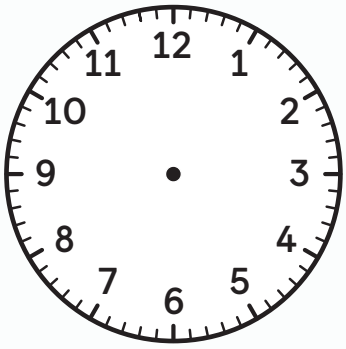
Half past means that it is 30 minutes past the hour. Times that are half past are written with the hour before the colon and 30 after the colon.



10:30

Try This

1 Draw the minute and hour hands on the clock to show half past 7.



2 Write the time to show half past 7.

Summary | Lesson 17

You can use what you know about clocks to tell time to the hour and half past the hour.

The hour hand is shorter than the minute hand.

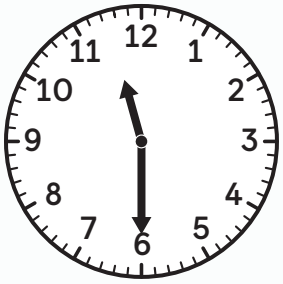
At half past the hour, the hour hand is halfway between 2 numbers.

6:30 and half past 6 are different ways to say the same time.

At half past the hour, the minute hand points straight down.

Try This

For Problems 1–3, circle to show if the statement about the clock is *true* or *false*.



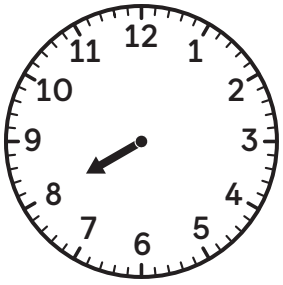
1 It is half past 11.

2 The hour hand is pointing to 6 minutes.

3 The time is 12:30.

In this sub-unit . . .

- We told time to the hour on clocks with only an **hour hand**.

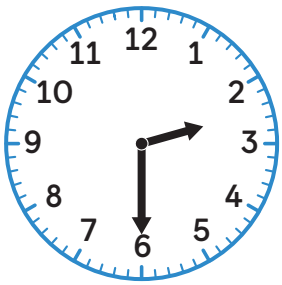


I know it is 8 o'clock because the hour hand is pointing directly at 8.

- We told time to the half hour on clocks with only an **hour hand**.

I know it is half past 2 because the hour hand is pointing halfway between 2 and 3.

- We wrote and told times to the hour and half hour.



2:30

Math tip: When the time is half past an hour, you write 30 for the minutes because it is 30 minutes past the hour.

Try This | Answer Key

Lesson 2

Sample responses shown.

1. I see a cone and a cylinder.
2. I see cylinders, rectangular prisms, and triangular prisms.

Lesson 3

Sample responses shown.

1. They all have corners.
2. The spotlight shape is curved.

Lesson 4

1. Sample explanation shown.
   I agree because triangles can be any color.

Lesson 5

1. Sample response shown.
   I agree because it does not have straight lines.

Lesson 6

1. Sample explanation shown.
   The shape is not a square because all 4 sides are not the same length.

Lesson 7

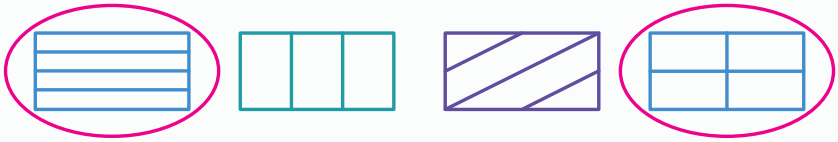
1. 6 squares
2. Sample response shown.
   I looked for 4 sides that are the same length and 4 square corners.

Try This | Answer Key

Lesson 8

1 Sample explanation shown.
No, because the 4 parts are not equal.

2 Sample explanation shown.
Yes, because there are 4 equal parts.

3 

Lesson 9

1 

2 

3 

Lesson 10

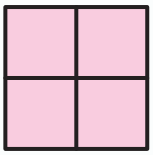
1 neither

2 fourths

3 halves

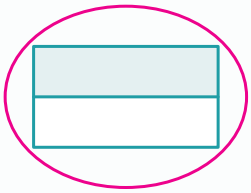
Lesson 11

1 Sample response shown.
A half of the circle is shaded.

2 

Lesson 12

1 a fourth

2–3  a half

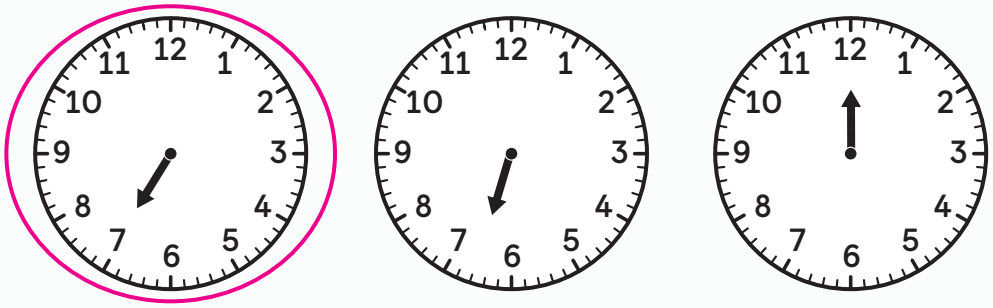
4 A half of the square

A fourth of the square

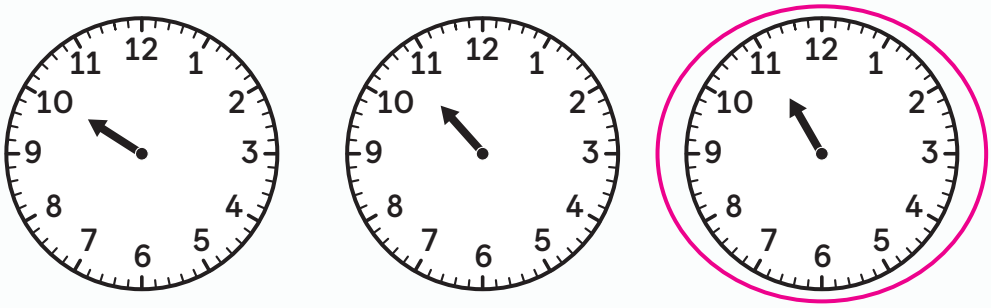
Try This | Answer Key

Lesson 13

1



2



Lesson 14

1 11

2 7

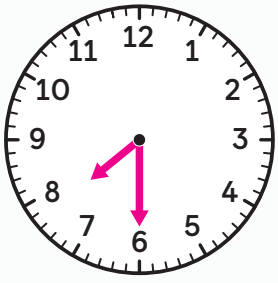
Lesson 15

1 half past 11

2 9 o'clock

Lesson 16

1



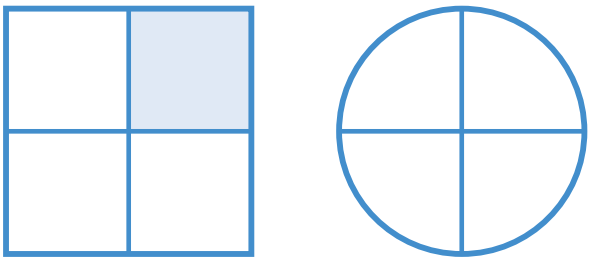
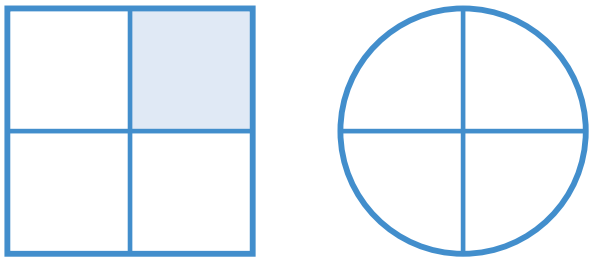
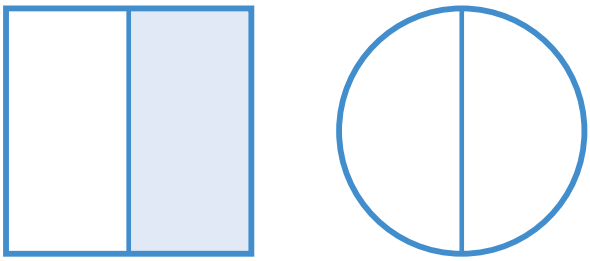
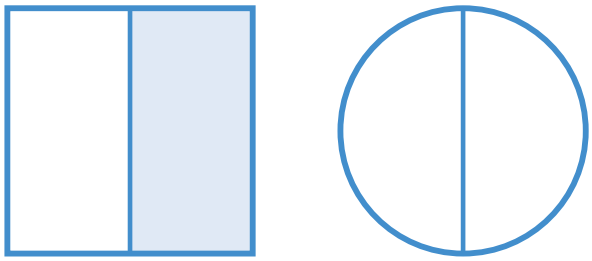
2 7 : 30

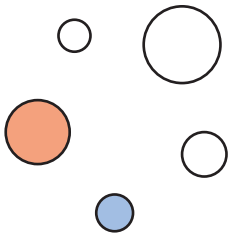
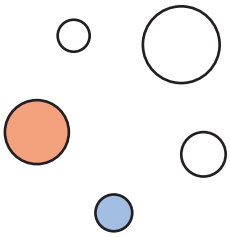
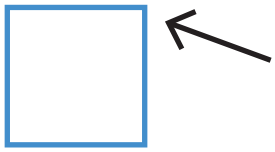
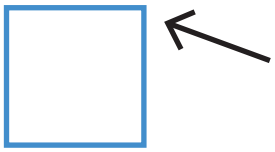
Lesson 17

1 

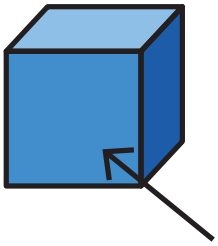
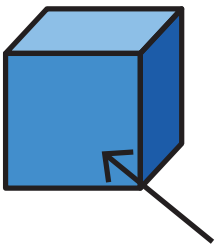
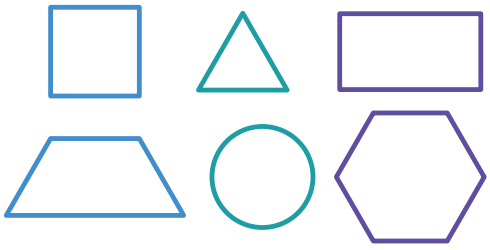
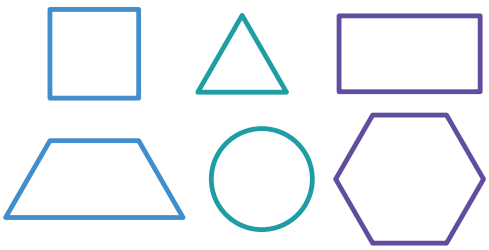
2 

3 

English	Español
A	
a fourth/fourths Each part of a shape that is split into 4 equal parts. The plural of fourth is fourths. 	**un cuarto, una cuarta parte/cuartos** Cada parte de una figura que se divide en 4 partes iguales. El plural de cuarto es cuartos. 
a half/halves Each part of a shape that is split into 2 equal parts. The plural of half is halves. 	**una mitad/mitades** Cada parte de una figura que se divide en 2 partes iguales. El plural de mitad es mitades. 
attribute A feature or trait that describes an object or set of objects.	**atributo** Característica o rasgo que describe un objeto o conjunto de objetos.

English	Español
C	
circle 	**círculo** 
cone 	**cono** 
corner 	**esquina** 
cube 	**cubo** 
curved 	**curvo** 

Grade 1 Unit 7 Glossary/1.er grado Unidad 7 Glosario

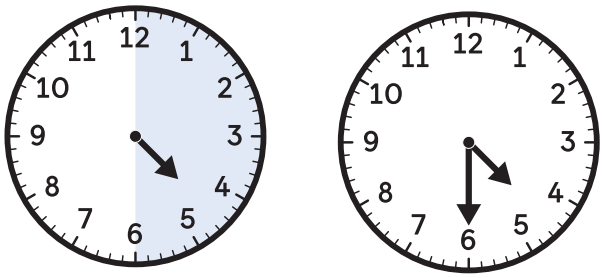
English	Español
cylinder 	**cilindro** 
E	
equal The same amount.	**igual** La misma cantidad.
F	
face 	**cara** 
flat shape 	**figura plana** 

English

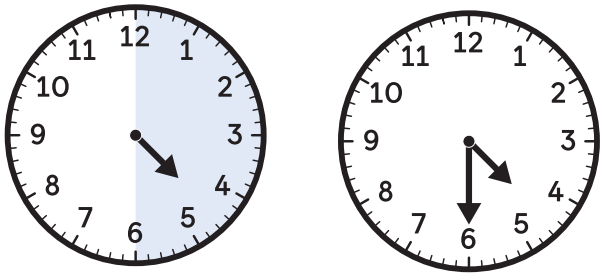
Español

H

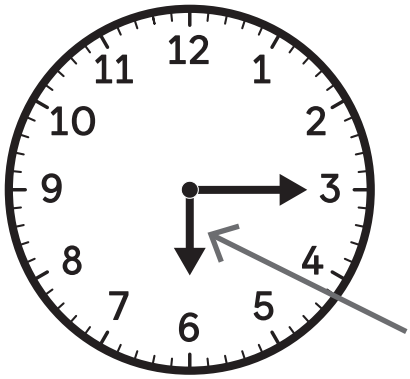
half past The clock shows half past 4 o'clock or 4:30.



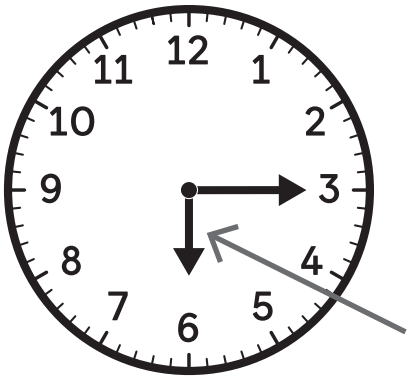
y media El reloj marca las cuatro y media o las 4:30.

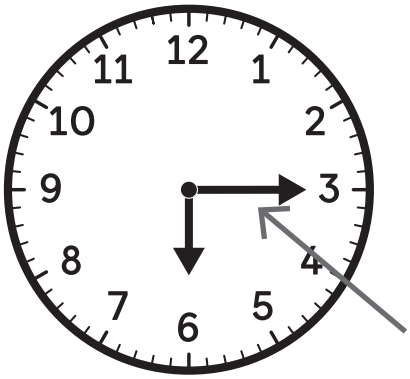
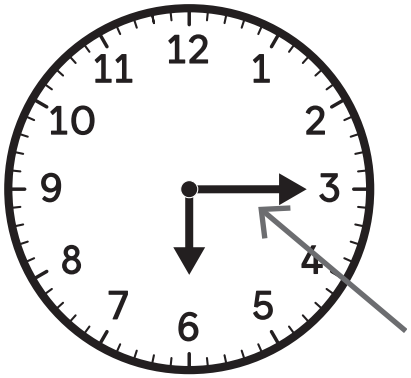
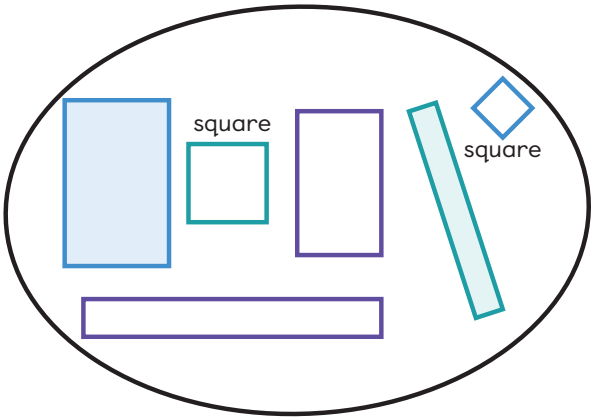
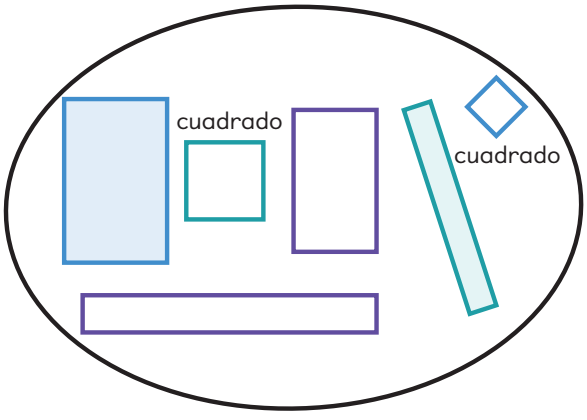


hour hand The short line on a clock that points to the hour.



manecilla de horas La aguja corta de un reloj que señala la hora.



English	Español
M	
minute hand The long line on a clock that points to the tick marks around the clock to show how many minutes have passed.	**manecilla de minutos, minutero** La aguja larga de un reloj que señala las marcas alrededor del reloj indicando cuántos minutos han pasado.
	
R	
rectangle	**rectángulo**
rectangles	rectángulos
	

English

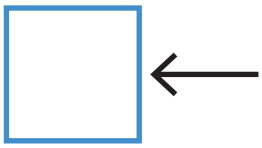
rectangular prism A solid shape with 6 rectangular faces.

Español

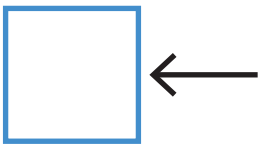
prisma rectangular
Un cuerpo geométrico con 6 caras rectangulares.

S

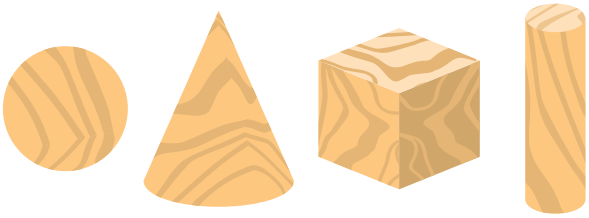
side



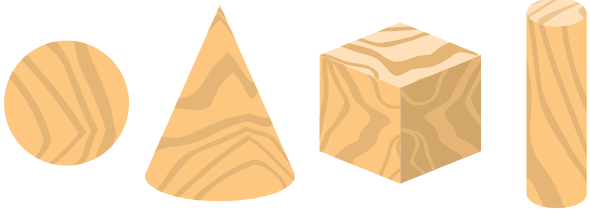
lado



solid shape



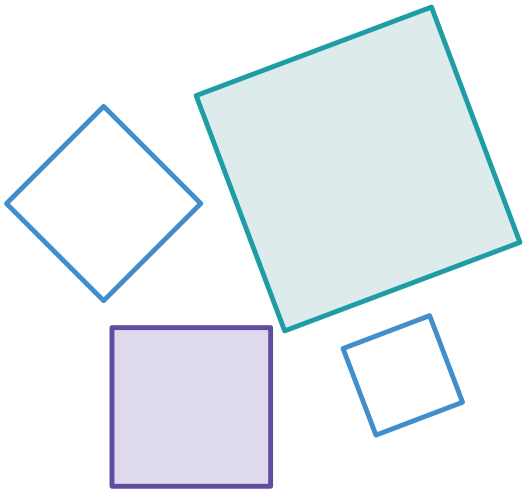
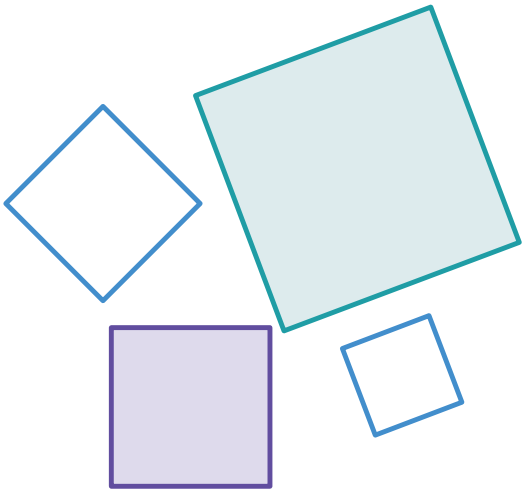
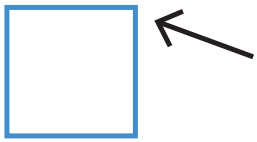
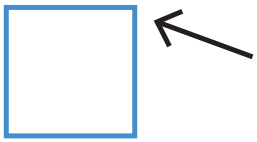
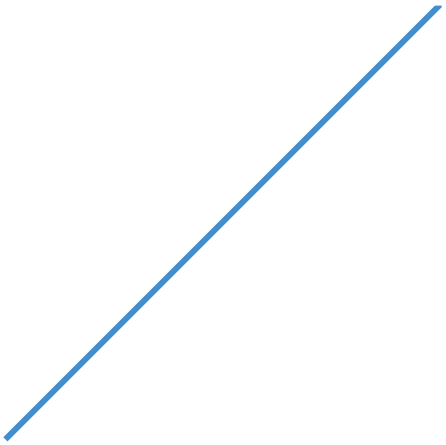
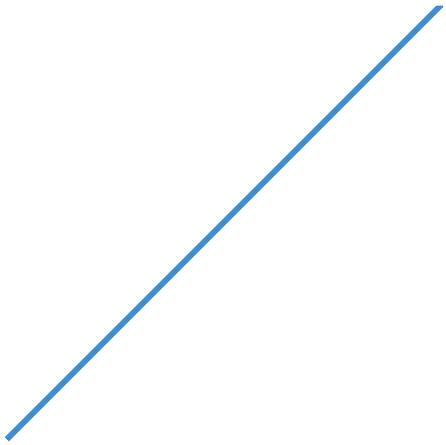
cuerpo geométrico

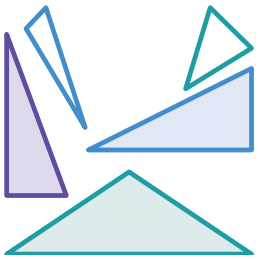
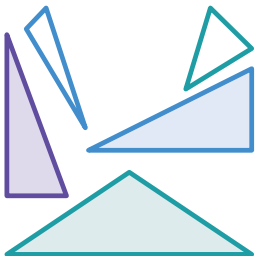
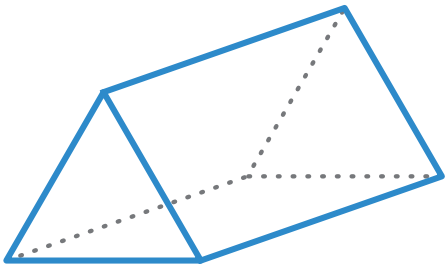


sphere

esfera

Grade 1 Unit 7 Glossary/1.er grado Unidad 7 Glosario

English	Español
square	**cuadrado**
	
square corner	**esquina en ángulo recto**
	
straight	**recto**
	

English	Español
T	
triangle 	**triángulo** 
triangular prism A solid shape with 2 triangular faces and 3 rectangular faces. 	**prisma triangular** Un cuerpo geométrico con 2 caras triangulares y 3 caras rectangulares.