Launch Activity

Shapes and Figures

Pancake Party

Have you made pancakes before? There are many different ways to make them.

You can make pancakes in different shapes. You can put fruit or nuts inside the pancakes. You can add toppings.

What kind of pancake sounds delicious to you?



Three Reads

Camila cuts her pancake so that it has 4 sides the same length.

Agustin cuts his pancake so that it has 3 sides that are the same length.

Mia's pancake is round.





FOR THE TEACHER • Three Reads: Read the story aloud to the class. Ask what the story is about. Next, have the class read the story aloud. Ask children what each of the numbers describe. Then, have partners read the story to each other. Ask children what math questions they can ask about the story.

Solve the Problem

Camila cuts her pancake so that it has 4 sides the same length.

Agustin cuts his pancake so that it has 3 sides the same length.

Mia's pancake is round.

What shapes could you make by combining the pancakes?

Model and draw to solve the problem.











Compare your new shapes with a partner's shapes. How could you combine both of your shapes to make another new shape?



FOR THE TEACHER • Read the question aloud to the class: What shapes could you make by combining the pancakes? Read **Math Talk** aloud to the class. Have children work with a partner to describe and compare their shapes.



Alike and Different

Circle the objects that are alike.

١.







2.







Identify Three-Dimensional Shapes

Color the blue. Color the red. Color the vellow.

3.



4.



5.



Sort by Size

Mark an X on the object that does not belong.

6.







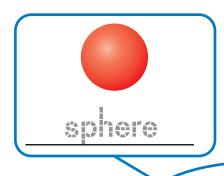


This page checks understanding of important skills needed for success in Chapter 12.

Vocabulary Builder

Visualize It

Write review words to name the shapes.





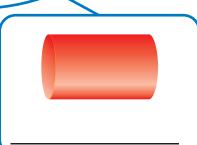
Connect to Vocabulary

Review Words

cone cube cylinder sphere

three-dimensional shapes

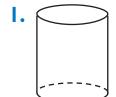




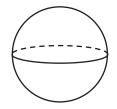
Understand Vocabulary

Look at the three-dimensional shapes.

Color the cube ORANGE).

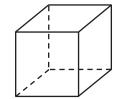


2.





3.



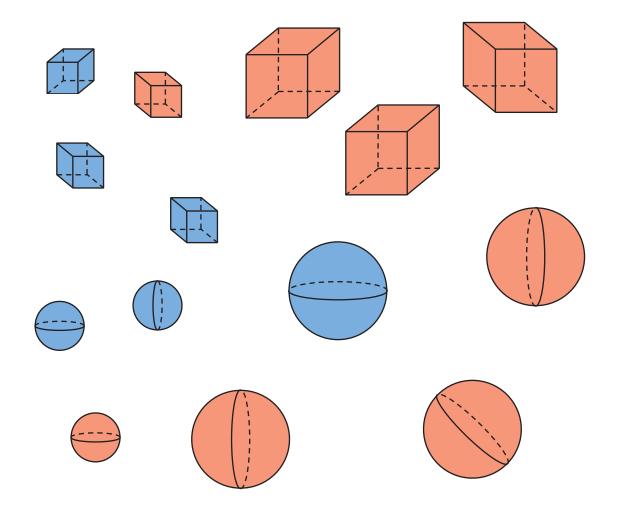
Houghton Mifflin Harcourt Publishing Company
 Image Credits: ○HMH

Three-Dimensional Shapes

(ICan) identify and describe three-dimensional shapes.

Listen and Draw

Draw to sort the three-dimensional shapes.





FOR THE TEACHER • Have children sort the three-dimensional shapes into two groups. Have them draw a loop around each group to show how they sorted.



Construct arguments and critique reasoning of others.

Explain how you sorted the shapes.

Model and Draw

These are three-dimensional shapes.

A cube is a special kind of rectangular prism.

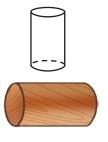




sphere



cone



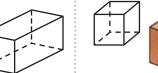


cylinder





rectangular prism



cube

The number of flat and curved surfaces make these figures what they are. Surfaces are a defining attribute of a three-dimensional shape.

Share and Show



Use three-dimensional shapes. Sort the shapes into three groups. Name the shapes.

- only flat surfaces
- 2. only a curved surface

On Your Own

Use three-dimensional shapes. Write the number of flat surfaces for each shape.

- 4. A rectangular prism has _____ flat surfaces.
- 5. A cube has _____ flat surfaces.
- 6. A cylinder has _____ flat surfaces.
- 7. A sphere has _____ flat surfaces.

Name the shapes.

Problems 4-7 can help you write the shape names.

8.



9.



10.



12.



П.



Problem Solving • Applications Real World





Circle the objects that match the clues.

13. Naima drew objects that have both flat and curved surfaces.









14. Sandy drew some rectangular prisms.











15. Draw a line to match each shape to the group where it belongs.











Both flat and curved surfaces Only flat surfaces Only a curved surface



TAKE HOME ACTIVITY • Ask your child to name real objects shaped like a sphere, a rectangular prism, and a cylinder.

Three-Dimensional Shapes

Use three-dimensional shapes. Write the number of flat surfaces for each shape.

- I. A cylinder has _____ flat surfaces.
- 2. A rectangular prism has _____ flat surfaces.
- **3.** A cone has _____ flat surface.
- **4.** A cube has _____ flat surfaces.

Problem Solving Real

5. Circle the object that matches the clue. Greta finds an object that has only a curved surface.



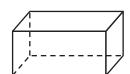


6. Write Math Use pictures or words to describe a cone.

Lesson Check

7. Circle the shape that has both flat and curved surfaces.









8. Circle the shape that has only a curved surface.









Spiral Review

9. Count forward. Write the number that is missing.

109, 110, 111, ____, 113

10. What is the sum of 2 and 3? Write the number sentence.



Combine Three-Dimensional Shapes

(I Can) combine three-dimensional shapes to make new shapes.

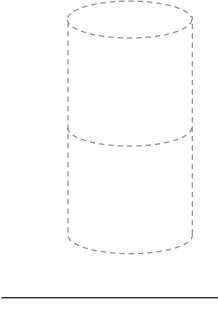
Listen and Draw Real World

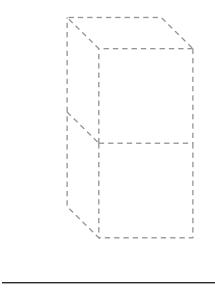


Trace to draw the new shape. Write to name the new shape.

Rashida









FOR THE TEACHER • Have children trace the shapes to solve the problems. Rashida stacks one cylinder on top of another cylinder. Carl stacks one cube on top of another cube. What new shapes do Rashida and Carl make?



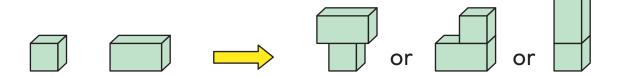
(MP) Attend to precision.

Describe the new shapes Rashida and Carl make.

Model and Draw

You can put shapes together to make a new shape.

What other new shapes could you make?



Share and Show



Use three-dimensional shapes.

Combine.	Which new shape can you make? Circle it.		
1.			
▼ 2.			
∅3.			

On Your Own

Use three-dimensional shapes.



Combine.	Which new shape can you make? Circle it.	
4.		
5 .		
6.		
7.		
8.		

Problem Solving • Applications World



9. Circle the shapes you could use to model the ice cream cone.











10. Circle the ways that make the same shape.



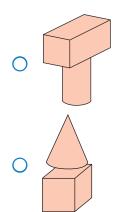


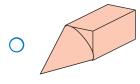


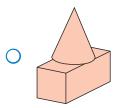




Combine and .Choose all the new shapes you can make.







Use three-dimensional shapes.

Combine.

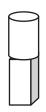
Which new shape can you make? Circle it.







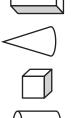




Problem Solving Real

3. Circle the shapes you could use to model the bird feeder.





4. Write Math Combine two shapes to make a new shape. Describe how you put the shapes together.

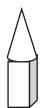
Lesson Check

5. Circle the shape that combines \Box and \triangle .









Spiral Review

6. Write the sum.

$$5 + 4 + 6 =$$

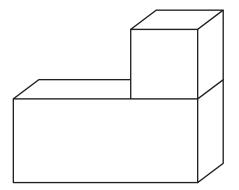
7. Circle the greater addend. Count on to find the sum.

(I Can) build new shapes from combined shapes.

Listen and Draw Real World



Draw to copy the shape.





FOR THE TEACHER • Leila put one box on top of another box. Draw to copy the new shape Leila made.



(MP) Attend to precision.

Describe how to draw to copy the new shape. Step 2

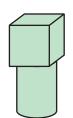
Step 3

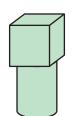
Circle the new shape you can make. Explain why you cannot make the other shape.

Build.

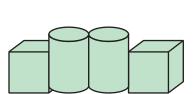
Repeat. (

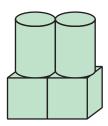
Combine.











Share and Show



Use three-dimensional shapes.

Build and Repeat.	Combine. Which new shape can you make? Circle it.		
I.			
⊘ 2.			
♂3.			

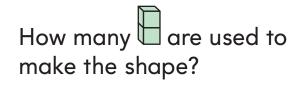
On Your Own

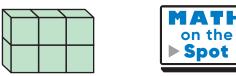
Use three-dimensional shapes.



Build and Repeat.	Combine. Which new shape can you make? Circle it.		
4.			
5.			
6.			

7. Look at the shape.







How many are used to make the shape?

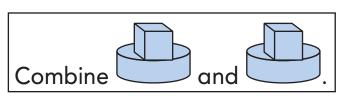
 make	the	shai	pe.

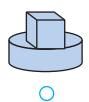
Problem Solving • Applications

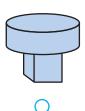
Use three-dimensional shapes.

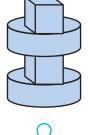
Build and Repeat.	Combine. Which new shape can you make? Circle it.	
8.		
9.		

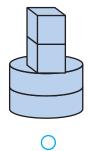
10. Which new shape can you make?













TAKE HOME ACTIVITY • Ask your child to explain how they solved Problem 10.

Make New Three-Dimensional Shapes

Use three-dimensional shapes.

Build and Repeat.

Combine. Which new shape can you make? Circle it.







2.





Problem Solving Real



3. Ezio builds this shape. Then he repeats and combines. Draw a shape he can make.



4. Write Math Use a cube and a cylinder to build a new shape. Repeat. Draw to show how you can combine these two new shapes to make a larger shape.

Lesson Check

5. Which new shape can you make? Circle the shape.

and	
	and









Spiral Review

6. Which addition fact helps you solve 15 - 6 =___? Write the number sentence.

____ + ____ = ____

7. Which doubles fact helps you solve 5 + 6 = 11? Circle the number sentence.

$$3 + 3 = 6$$

$$4 + 4 = 8$$

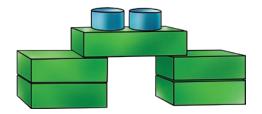
$$5 + 5 = 10$$

$$7 + 7 = 14$$

Take Apart Three-Dimensional Shapes

(ICan) take apart combined shapes.

Karnam has , , , and . He chose some shapes to build a bridge. Which shapes did Karnam use to build the bridge?





UNLOCK the Problem

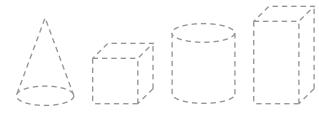


What do I need to find?

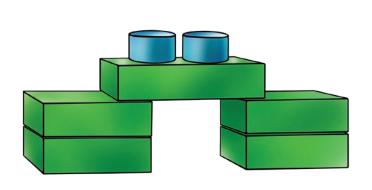
which Karnam chose to build the bridge

What information do I need to use?

Karnam has these shapes.



Show how to solve the problem.











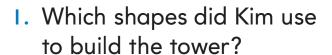


HOME CONNECTION • Your child is investigating how shapes can be taken apart. Being able to decompose shapes into smaller parts provides a foundation for future work with fractions.

Try Another Problem

Kim used shapes to build this castle.

Use three-dimensional shapes. Circle your answer.









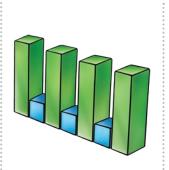






- What do I need to find?
- What information do I need to use?

2. Which shapes did Kim use to build this wall?



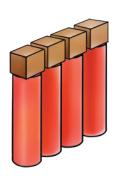








3. Which shapes did Kim use to build this wall?



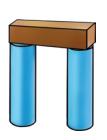








4. Which shapes did Kim use to build the gate?















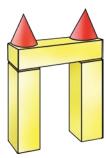
Look for and make use of structure.

How do you know which shapes Kim used to build the tower?

On Your Own Real World

Use three-dimensional shapes. Circle your answer.

5. Anya used shapes to build this gate. Which shapes did Anya use?



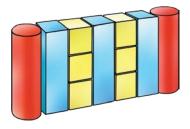








✓ 6. Chris used shapes to build this wall. Which shapes did Chris use?











7. Rosa uses , , , and to build a tower. Draw to show a tower Rosa could build.

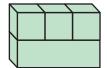


Problem Solving • Applications

Circle the ways that show the same shape.

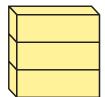
8.



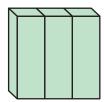




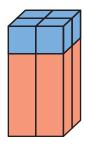
9.







10. Sharon has many different blocks. She built this shape with her blocks.



Choose all the shapes Sharon used.







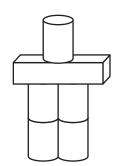




Take Apart Three-Dimensional Shapes

Use three-dimensional shapes. Circle your answer.

 Paco used shapes to build this robot. Circle the shapes he used.









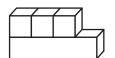


Problem Solving

2. Circle the ways that show the same shape.



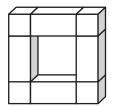




3. Write Math Draw a picture of a house made from shapes. Write the shape names you used.

Lesson Check

4. Lara made this picture frame. Circle the shapes she used to make the frame.











Spiral Review

5. Compare each pair of numbers. Write <, >, or =.

13 31 13 13 31 31 31 31

6. Subtract. What is the difference? Write the number.

12 - 9 =

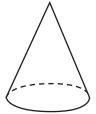
Two-Dimensional Shapes on Three-Dimensional Shapes

(I Can) find two-dimensional shapes on the flat surfaces of three-dimensional shapes.

Listen and Draw Real World



Use a cone.





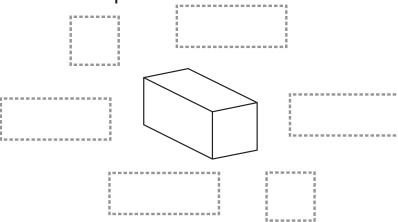
Look for and make use of structure.

What other shape could you use to draw the same kind of picture?



Model and Draw

Trace around the flat surfaces of the three-dimensional shape to find the two-dimensional shapes.



Share and Show

Math Board

Use three-dimensional shapes. Trace around the flat surfaces. Circle the shapes you draw.

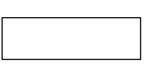


١.

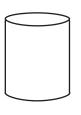


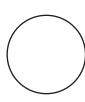






₫ 2.



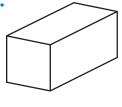








₫3.











On Your Own

Circle the objects you could trace to draw the shape.

4.



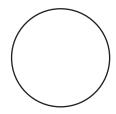








5.



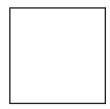








6.











7.











8. Draw a shape you would make if you traced this object.

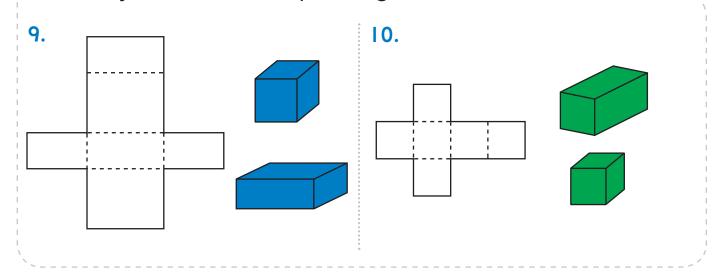




Problem Solving • Applications Real World



Circle the shape that the pattern will make if you fold it and tape it together.



II. Kei wants to trace a ____.She finds these objects.Which object should she use?







globe

jar box

What would happen if Kei used the to trace a shape?



Two-Dimensional Shapes on Three-Dimensional Shapes

Circle the objects you could trace to draw the shape.

١.











2.



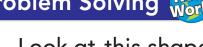








Problem Solving Real



3. Look at this shape.

Draw the shape you would make if you traced this object.



4. Write Math Use pictures or words to explain how you would describe the shapes of flat surfaces you may see on a tissue box.

Lesson Check

5. Which flat surface does a cone have? Circle the shape.









6. Which flat surfaces could a rectangular prism have? Circle the pair of shapes.









Spiral Review

Write a subtraction equation to solve.

7. Jade has 8 books.
She gives some of them to Dana.
Now Jade has 6 books.
How many did she give to Dana?



8. Write the sum.

$$3 + 0 =$$

Chapter Review

 Match each shape to the group where it belongs.









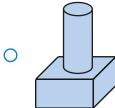


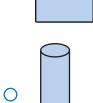
Only flat surfaces

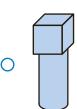
Only a curved surface

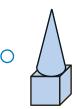
Both flat and curved surfaces

2. Combine and . Choose all the new shapes you can make.











3. Build and repeat. Choose Yes or No.



- Yes
- O No

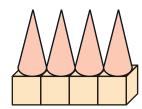


- O Yes
- O No

Can two make

- Yes
- O No

4. Damon built this shape.



Choose all the shapes Damon used.









5. Circle the number that makes the sentence true.

There are I circles on a



6. Jameela wants to trace a ○. She finds these objects.







Draw the object Jameela should trace.

What would happen if she used the



to trace a shape?

7. Which shape has only 2 flat surfaces?



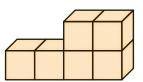




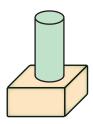




8. Look at the shape.



How many are used to make the shape?



Which shapes did Kesi use? Circle them.





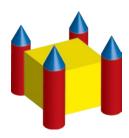






Draw another way to combine the objects.

10. Hector built this shape.



Choose all the shapes Hector used.







