Explore Sorting Shapes

Learning Target

- Distinguish between defining attributes versus non-defining attributes; build and draw shapes to possess defining attributes.

SMP 1, 2, 3, 4, 5, 6

How can you sort the shapes?

Try It

Math Toolkit

- flat shapes

Connect It

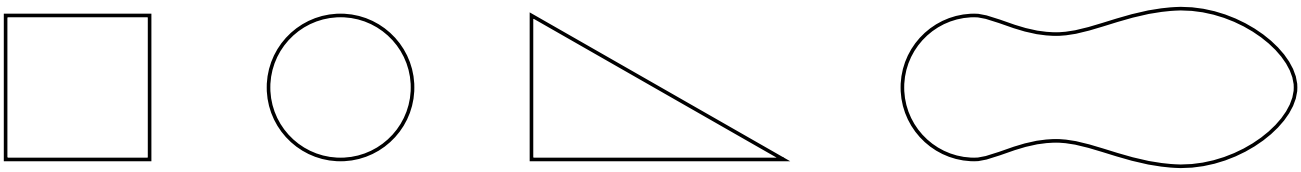
Draw 3 shapes that have straight sides and 4 corners.

Prepare for Naming and Describing Shapes

1 Think about what you know about the corners of shapes. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.

In My Own Words	My Picture
corner	
Examples	Non-Examples

2 Circle the corners on the shapes.

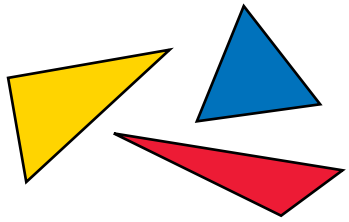
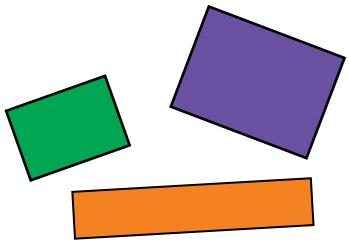
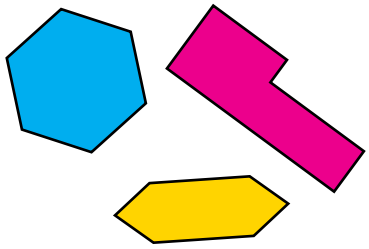


3 Solve the problem.

Draw 3 shapes that are closed and have straight sides.

Develop Naming and Describing Two-Dimensional Shapes

Sophie says the shapes in each group are the same in some way. How are they the same?

Group A	Group B	Group C
		

Try It

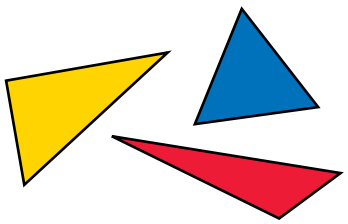
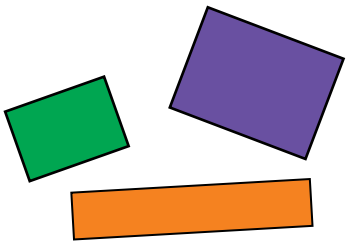
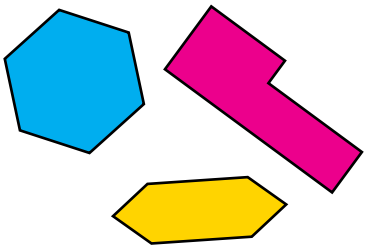
Math Toolkit

- flat shapes

DISCUSS IT

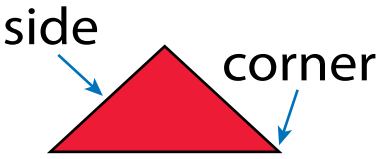
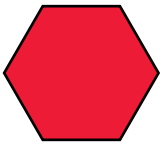
What are some ways to sort shapes?

Sophie says the shapes in each group are the same in some way. How are they the same?

Group A	Group B	Group C
		

Model It

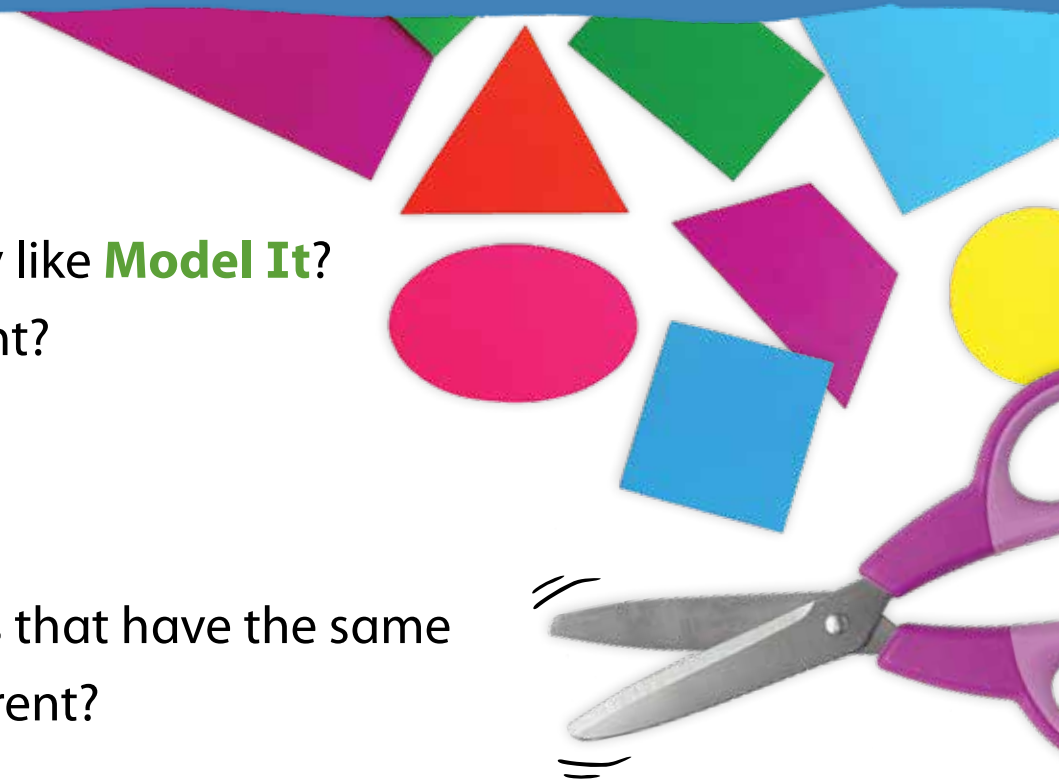
The number of sides and corners tells the shape name.

3 sides 3 corners	4 sides 4 square corners	6 sides 6 corners
		
triangle	**rectangle**	**hexagon**

_____ have 3 sides and 3 corners.

Rectangles have _____ sides and _____ square corners.

Hexagons have _____ sides and _____ corners.



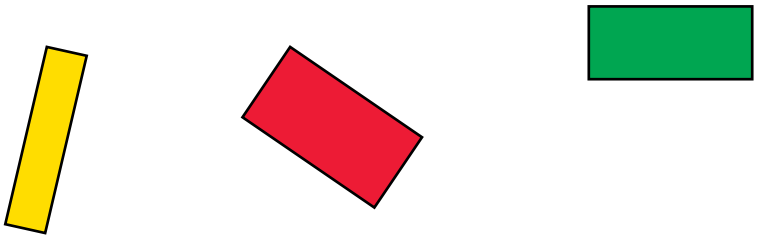
Connect It

1. How is your way like **Model It**? How is it different?

2. Why can shapes that have the same name look different?

Apply It

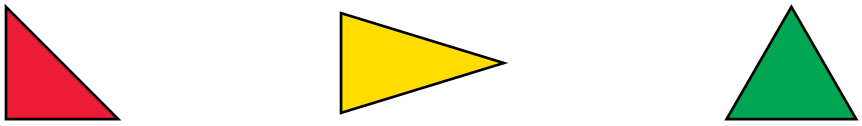
3. Ali says these shapes are the same in some way. How are they the same?



They have _____ sides and _____ square corners.

The shapes are _____.

4 June says these shapes are the same in some way. How are they the same?



They have _____ sides and _____ corners.

The shapes are _____.

5 Sammie says these shapes are the same in some way. How are they the same?

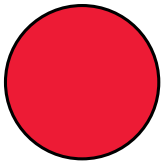
square **rhombus**

They have _____ sides that are all the _____

length and _____ corners.

6 Describe the **circle**.

_____ sides



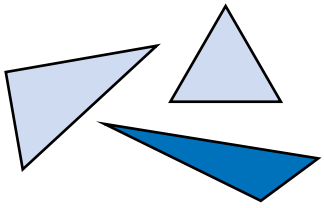
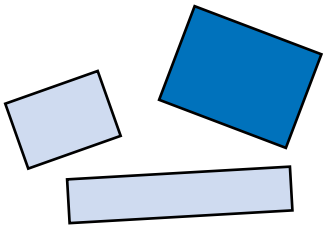
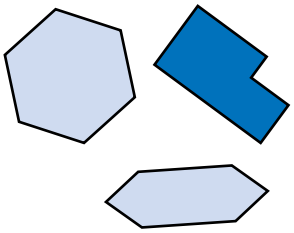
_____ corners

Practice Naming and Describing Shapes

Look at the Example. Then solve problems 1–6.

Example

Here are some shapes you know.

triangle	rectangle	hexagon
		

Count sides and corners.

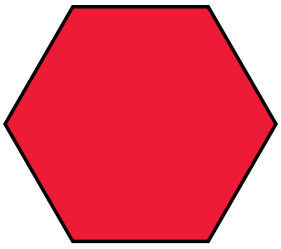
Name the shape.

1 4 sides
4 square corners

_____

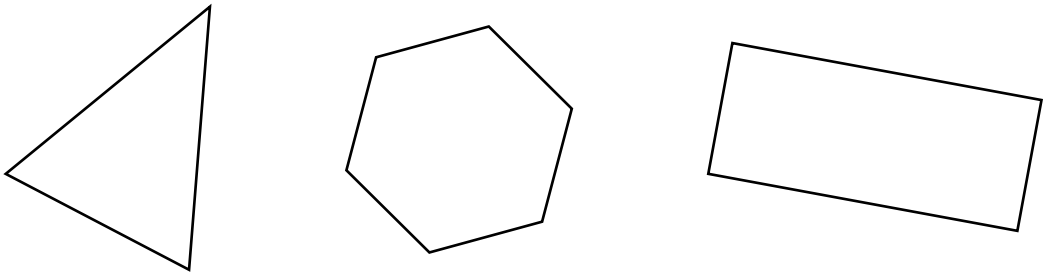
2 ___ sides

___ corners

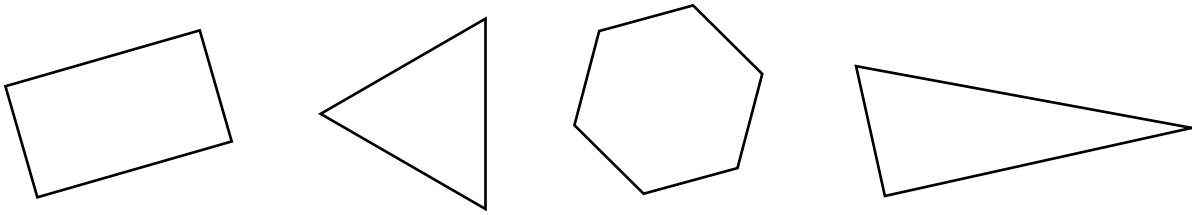


_____

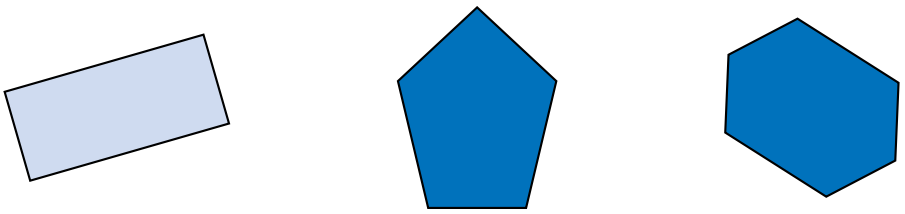
3 Color the triangle green. Color the rectangle red. Color the hexagon yellow.



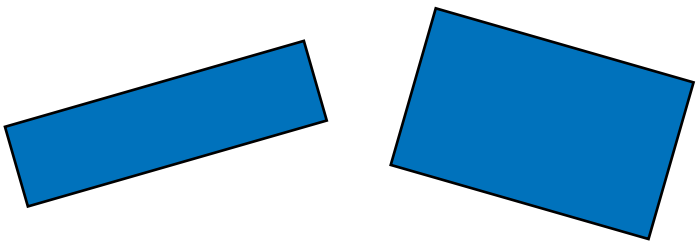
4 Color the shapes with square corners blue.



5 Circle the shape that has 6 sides and 6 corners.



6 What is the same about these two shapes? Circle.



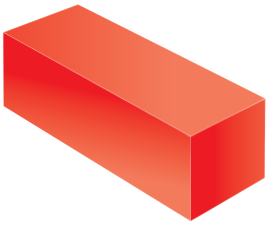
square corners

number of corners

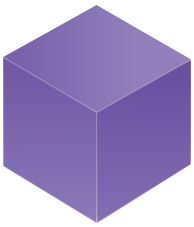
Develop Naming and Describing Three-Dimensional Shapes

How are these shapes the same?

cone



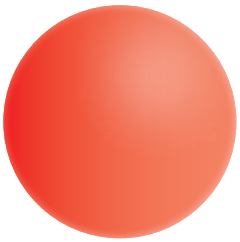
rectangular prism



cube

cylinder

How is this shape different?



sphere

Try It

Math Toolkit

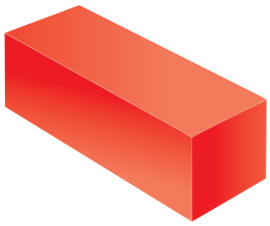
- solid shapes set

DISCUSS IT

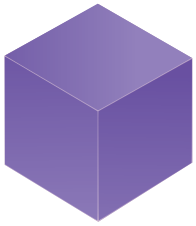
I started by . . .

How are these shapes the same?

cone



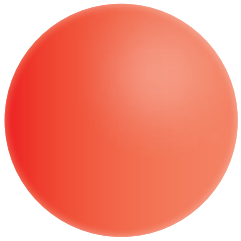
rectangular prism



cube

cylinder

How is this shape different?



sphere

Model It

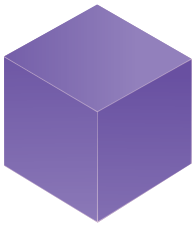
Make a ✓ if true. Make an X if not true.

A cylinder has:

_____ 2 circle **faces**

_____ 2 straight **edges**

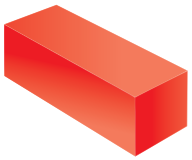
A cube has:



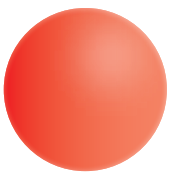
_____ 0 straight edges

_____ 6 square faces

A cone has 1 circle _____.



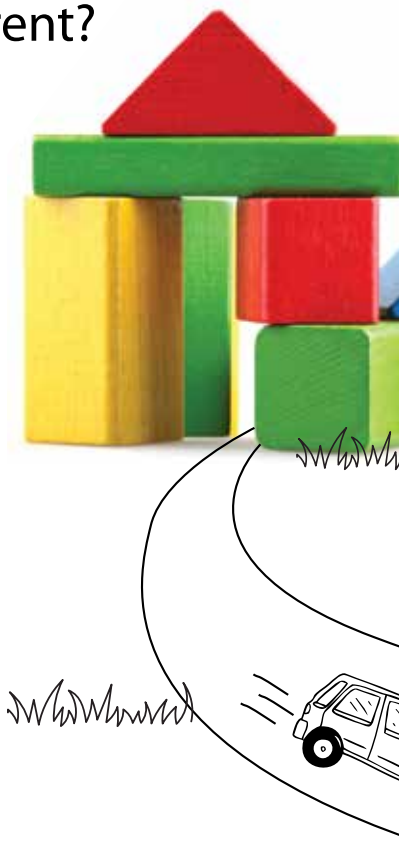
A rectangular prism has _____ faces.



A sphere has _____ faces.

Connect It

1 How is your way like **Model It**? How is it different?

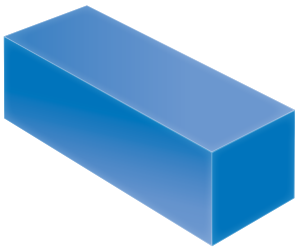


2 Boom says he can make a cube with 6 faces.
Buzz says he can make a sphere with 2 faces.

Who is right? How do you know?

Apply It

3 Make a ✓ if true. Make an X if not true.



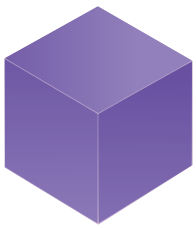
Describe this rectangular prism.

_____ 12 straight edges
_____ 6 corners
_____ 4 square faces
_____ cannot roll

Describe this cone.

_____ 0 sides
_____ 0 straight edges
_____ 1 circle face
_____ 1 triangle face

4 Describe this cube. Make a ✓ if true.
Make an X if not true.



_____ 6 faces

_____ 8 corners

_____ 10 edges

_____ can roll

5 Describe this cylinder. Make a ✓ if true.
Make an X if not true.

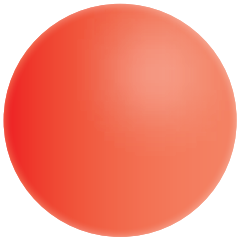
_____ 2 circle faces

_____ 6 corners

_____ 0 straight edges

_____ can roll

6 Describe this sphere. Make a ✓ if true.
Make an X if not true.



_____ 0 edges

_____ 0 corners

_____ 2 faces

_____ can roll

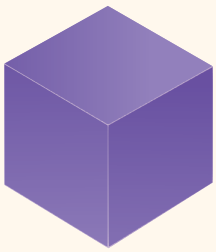
Practice Naming and Describing Shapes

Look at the Example. Then solve problems 1–5.

Example

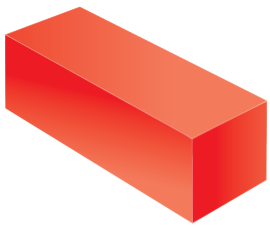
Make a ✓ if true.
Make an X if not true.

→ Describe this cube.



✓ 12 edges
X 7 corners
✓ all edges the same length

1 Describe this rectangular prism.



_____ 12 edges

_____ all edges the same length

_____ 7 corners

2 Describe this cylinder.

_____ 2 circle faces

_____ can roll

_____ 0 corners

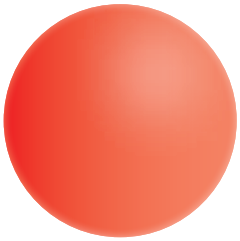
3 Describe this cone.

_____ 1 circle face

_____ 3 corners

_____ can roll

4 Describe this sphere.

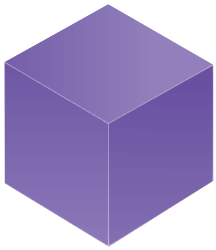


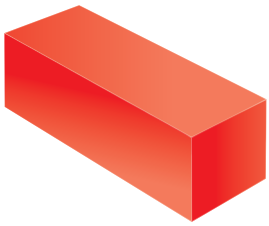
_____ 0 edges

_____ 0 corners

_____ cannot roll

5 Look at these shapes.





Circle all the ways they are alike.

Ⓐ 12 edges

Ⓑ 8 corners

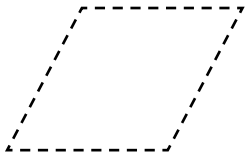
Ⓒ all square faces

Ⓓ 6 faces

Refine Naming and Describing Shapes

Complete the Example. Then solve problems 1–5.

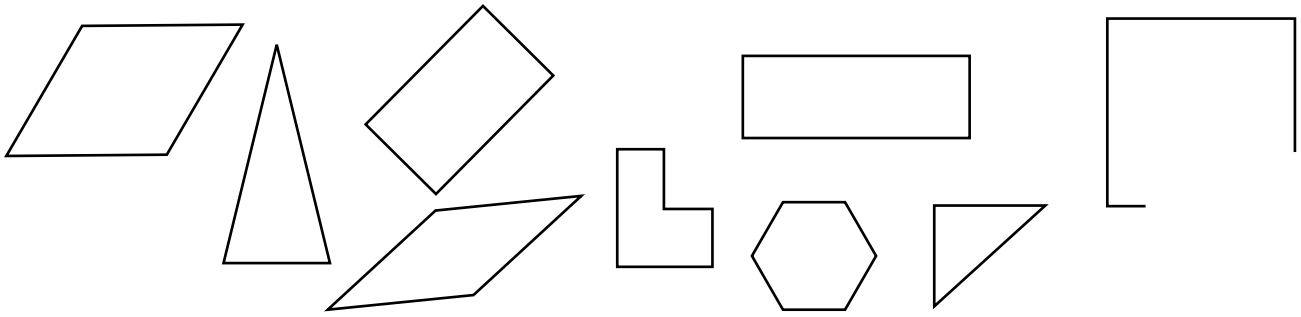
Example Draw the shape named in each box.

rhombus	rectangle	square
		

Apply It

1 Color the shapes.

triangles ■ hexagons ■ rectangles ■ rhombuses ■



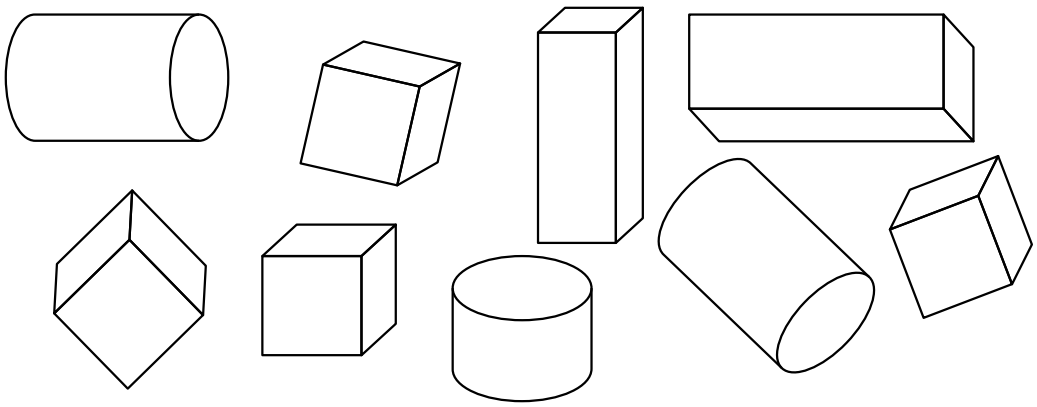
2 Boom says this shape is a rectangle.
Do you agree? Why or why not?

3 Draw each shape.

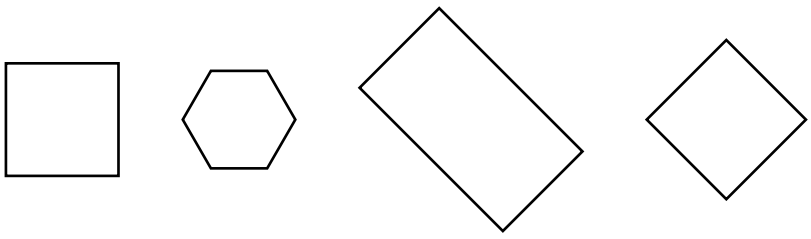
hexagon	rectangle	triangle

4 Color the shapes.

rectangular prisms ■ cubes ■ cylinders ■



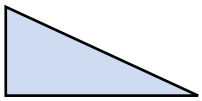
5 Circle the squares.



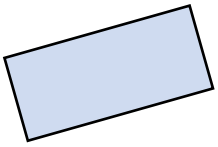
Practice Naming and Describing Shapes

Look at the Example. Then solve problems 1–5.

Example Draw each shape.



triangle



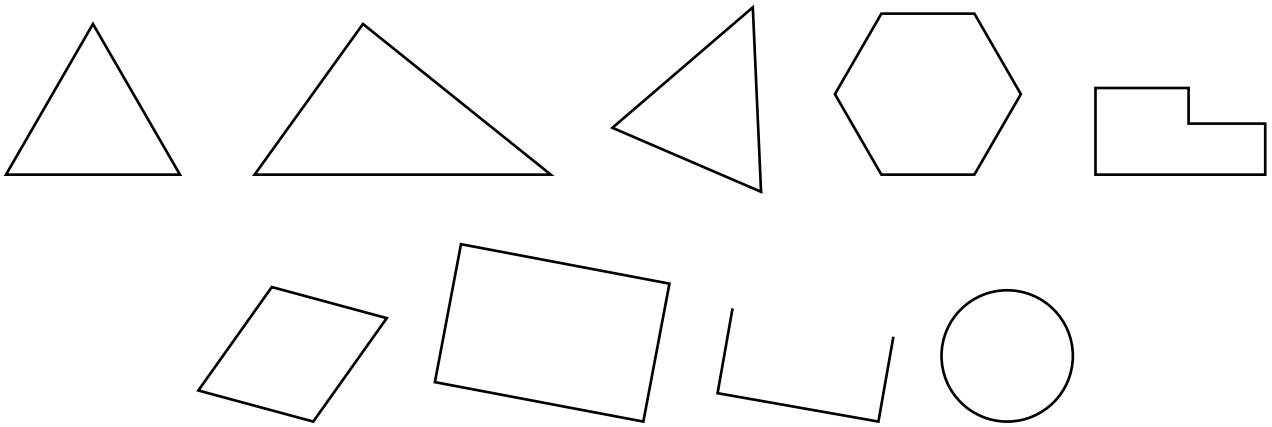
rectangle

1 Draw each shape.

rhombus | square | hexagon

2 Color the shapes.

triangles ■ rhombuses ■ rectangles ■ hexagons ■



3 Draw each shape.

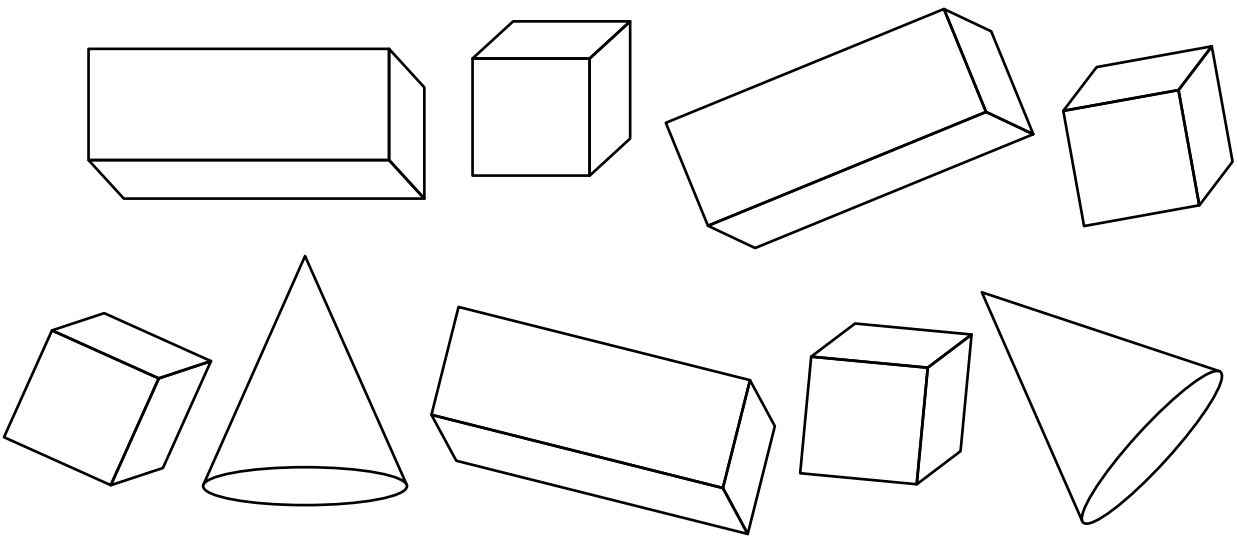
rectangle

triangle

4 Circle the hexagons.

5 Color the shapes.

rectangular prisms ■ cubes ■ cones ■



Refine Naming and Describing Shapes

Apply It

Solve problems 1–5.

1 Make the same shape in different ways.

Choose a shape to draw. Circle its name.

hexagon	triangle	rectangle
rhombus	square	

Draw your shape 3 different ways.

2 How are your shapes different? How are they alike?

3 Circle all the reasons this shape is a rectangle.

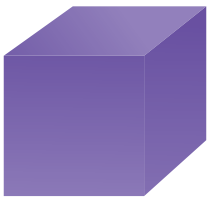
Ⓐ It has 4 sides.

Ⓑ It is bigger than a square.

Ⓒ It has 4 square corners.

Ⓓ It is red.

4 Circle all the reasons this shape is a cube.



Ⓐ It has 12 edges.

Ⓑ It has all square faces.

Ⓒ It is purple.

Ⓓ It has 8 corners.

5 Draw each shape.

rhombus | triangle | hexagon

Explore Putting Shapes Together

Learning Target

- Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape.

SMP 1, 2, 3, 4, 5, 6, 7

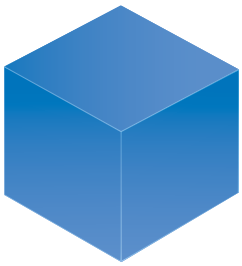
What shapes are the faces of these solid shapes?

Try It

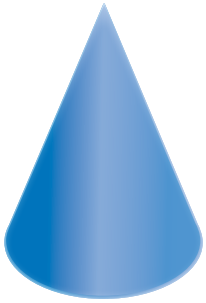
Math Toolkit

- solid shapes set

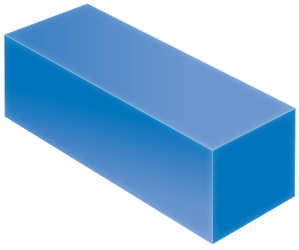
Draw 1 face of a cube.



Draw 1 face of a cone.

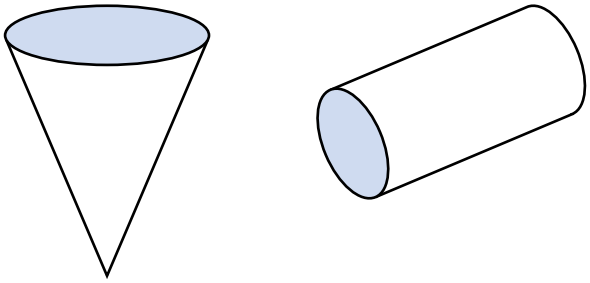


Draw 1 face of a rectangular prism.

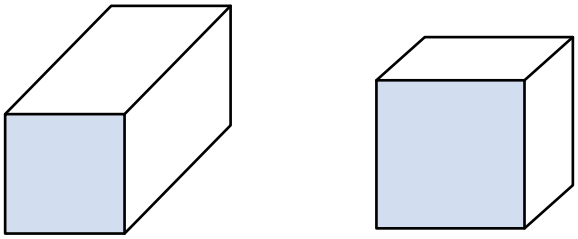


Connect It

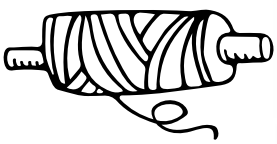
What shapes are these faces?



This cone and cylinder both have a _____ face.

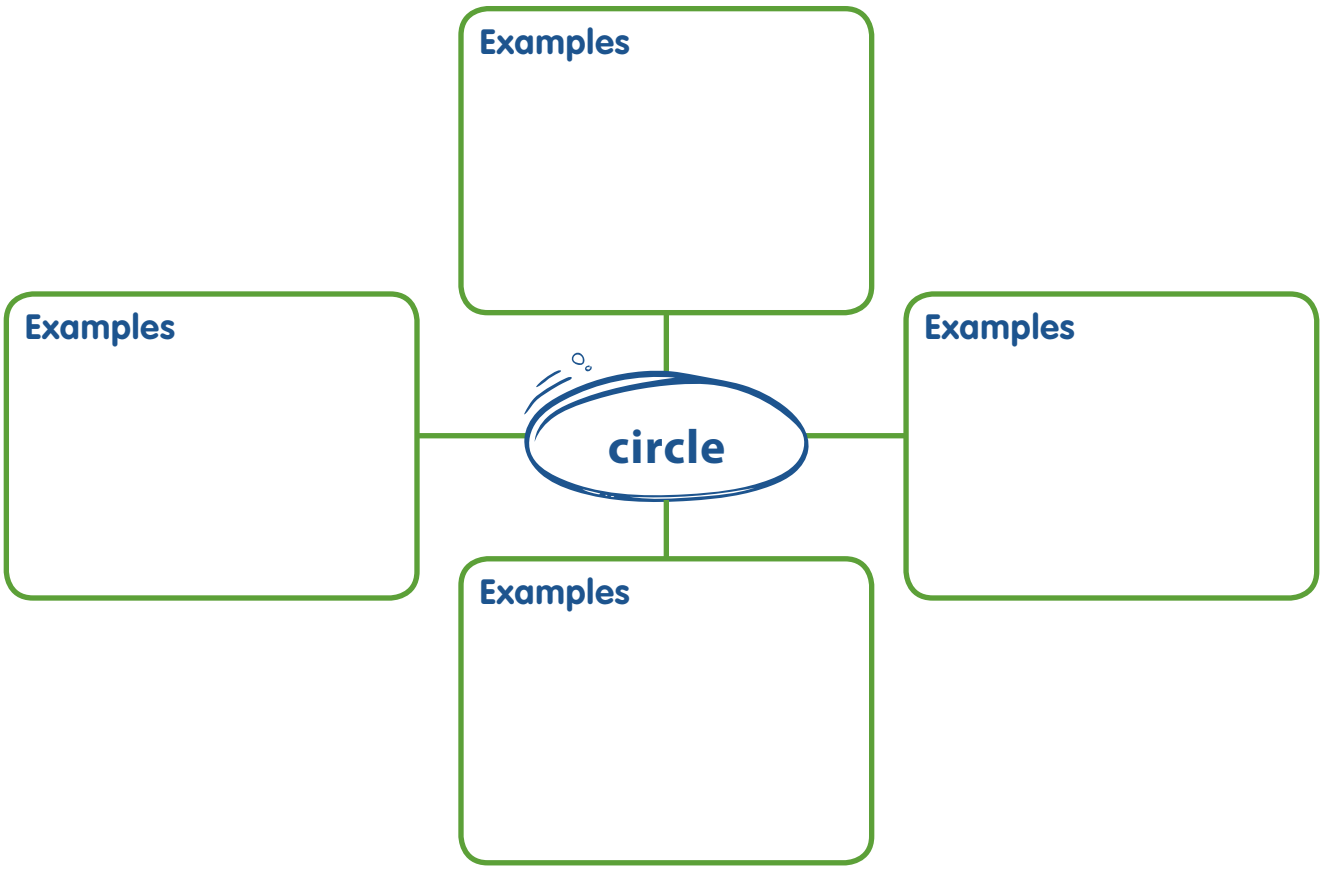


This rectangular prism and cube both have a _____ face.

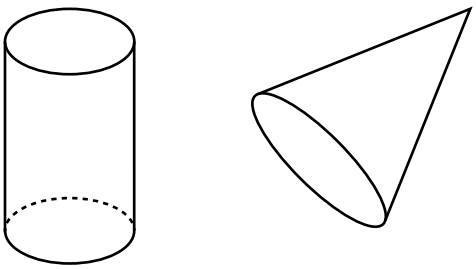


Prepare for Putting Shapes Together

1 Think about what you know about circles. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.



2 Color the parts of the two shapes that are circles.

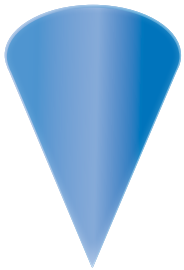


Name: _____

3 Solve the problem. Show your work.

Draw 1 face of a cylinder.

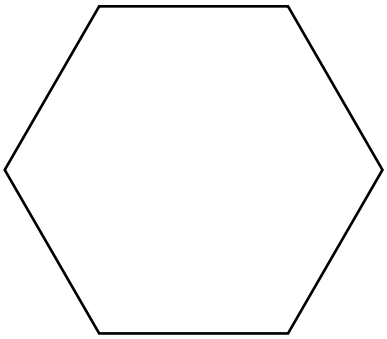
Draw 1 face of a cone.



Draw 1 face of a rectangular prism.

Develop Putting Shapes Together

Use pattern blocks to make a hexagon.
Trace or draw how you made it.
Color the shapes to match the blocks.



Try It

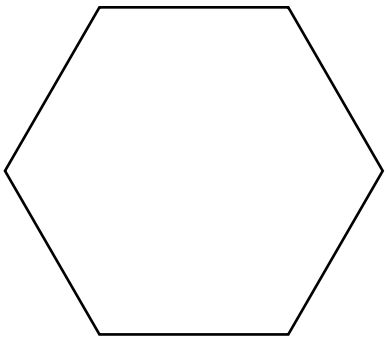
Math Toolkit

- pattern blocks

DISCUSS IT

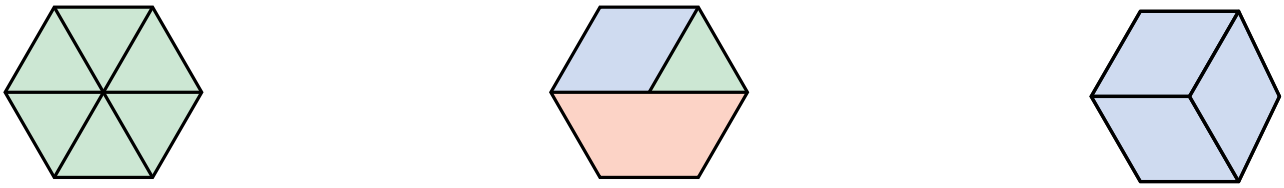
How can thinking about parts of shapes help?

Use pattern blocks to make a hexagon.
Trace or draw how you made it.
Color the shapes to match the blocks.



Model It

You can make the same shape in different ways.

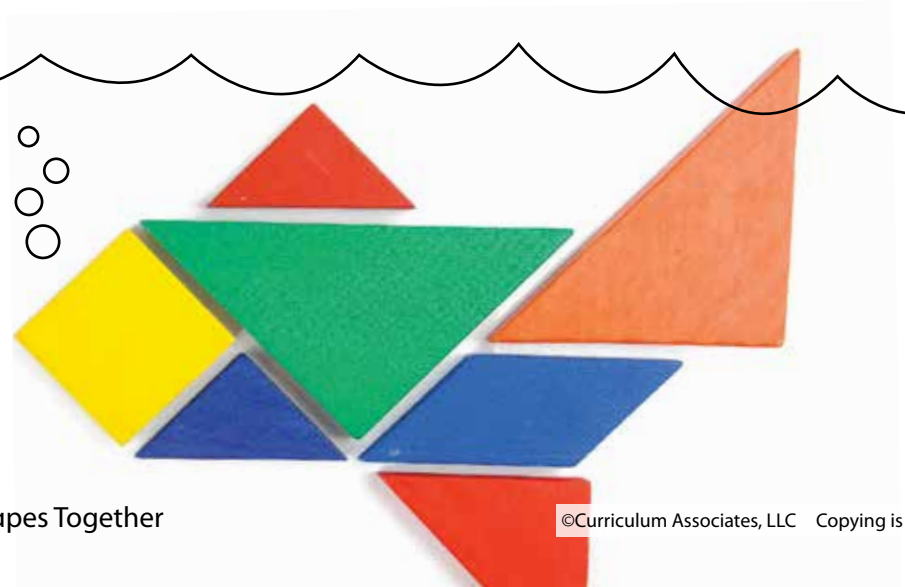


You can make a hexagon with _____ triangles.

You can make a hexagon with _____ **trapezoid**,

_____ rhombus, and _____ triangle.

You can make a hexagon with _____ rhombuses.

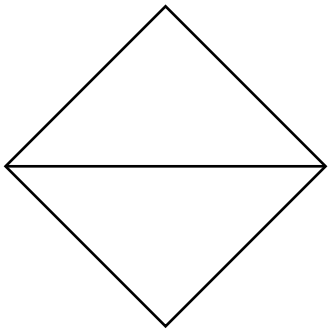


Connect It

1 How is your way like **Model It**?
How is it different?

2 Buzz says the two triangles make a square.
Boom says the shape is not a square.

Who is right? How do you know?

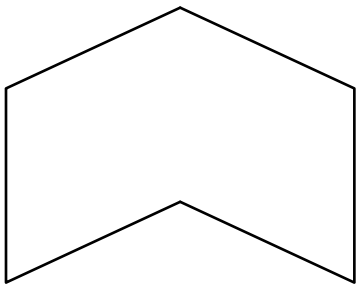


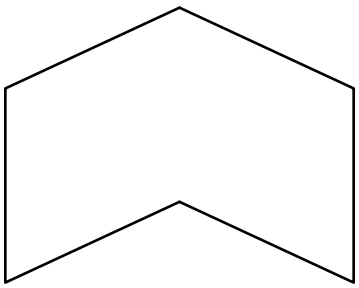
Apply It

3 Draw lines and color to show how to make this trapezoid using 3 pattern blocks.

What shapes did you use? _____

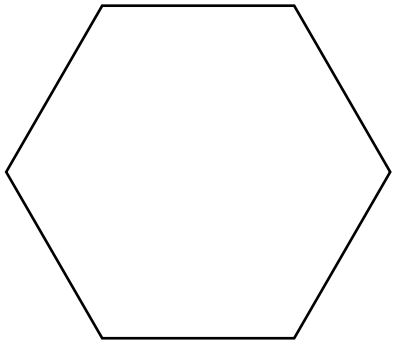
4 Draw lines and color to show 2 ways to make this shape using pattern blocks.



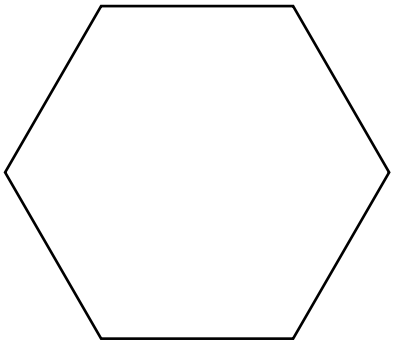


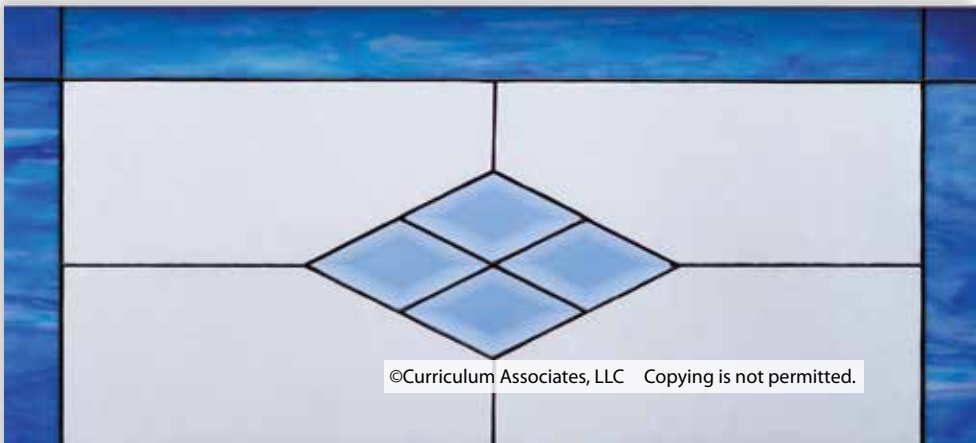
5 Color to show how to make this hexagon.

Use 3 shapes.



Use 4 shapes.



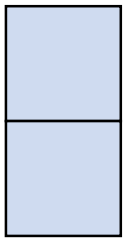


Practice Putting Shapes Together

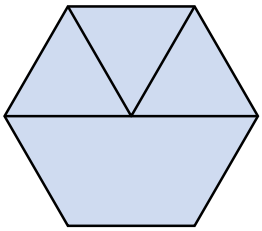
Look at the Example. Then solve problems 1–3.

Example

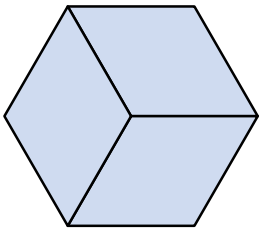
You can put shapes together to make new shapes.



2 squares make a rectangle.



1 trapezoid and 3 triangles make a hexagon.



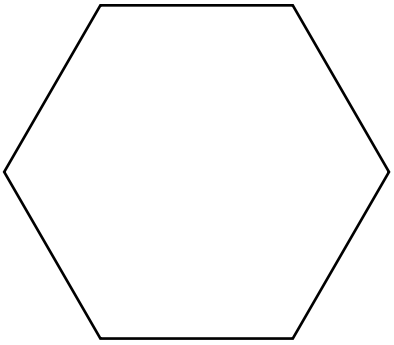
3 rhombuses make a hexagon.

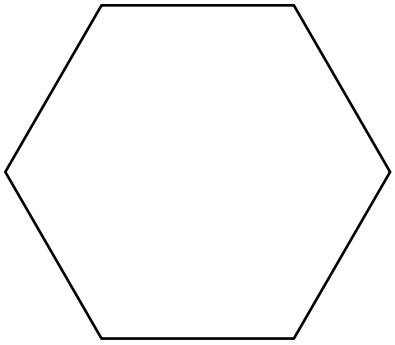
Use shapes like those shown above to make new shapes.

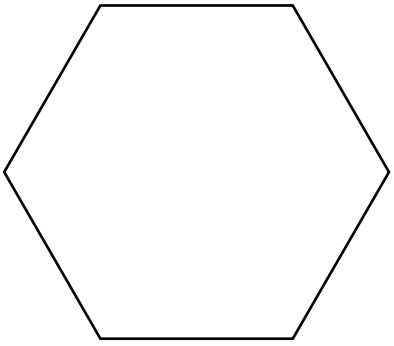
1 Show two ways to put together shapes to make a trapezoid.

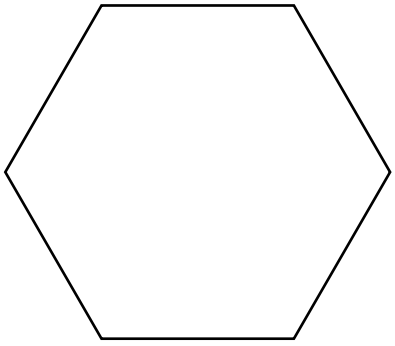
Name: _____

2 Show different ways to make a hexagon.



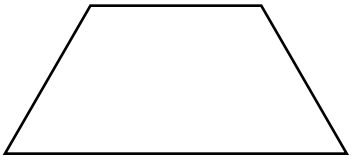




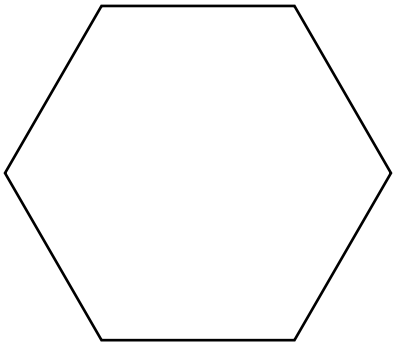


3 Buzz and Boom each have 3 rhombuses. Buzz says he can put them together to make a trapezoid. Boom says he can put them together to make a hexagon. Draw to show who is right.

Buzz



Boom



Develop Putting Shapes Together

Put some cubes together to make a new shape.
Tell how many faces it has.

Try It

Math Toolkit

- connecting cubes

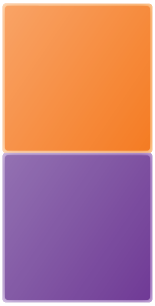
DISCUSS IT

The faces on my shape look like . . .

Put some cubes together to make a new shape.
Tell how many faces it has.

Model It

You can make larger shapes from smaller shapes in different ways.



You can make a larger rectangular prism using _____.

Connect It

1. How is your way like **Model It**? How is it different?

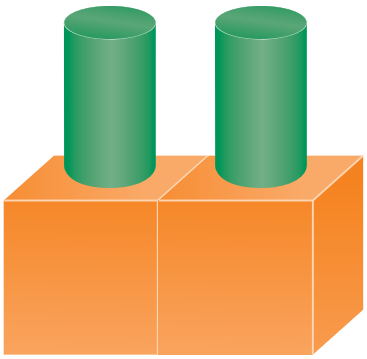
2 How can you tell the name of the new shape?

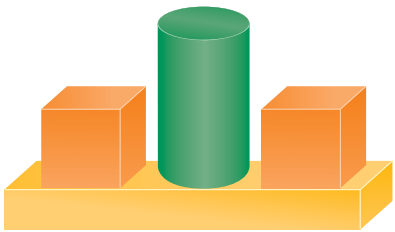
Apply It

3 How many cubes make up this shape?

There are _____ cubes that make up the shape.

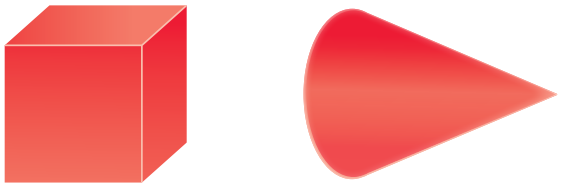
4 Circle the shape you could make with 2 cylinders and 2 cubes.

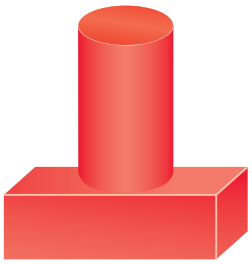




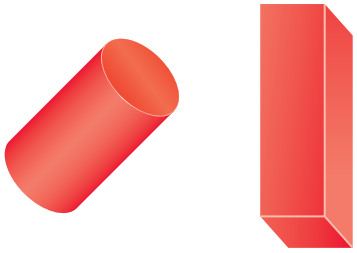
Draw a line to match each set of shapes with the larger shape you could make with them.

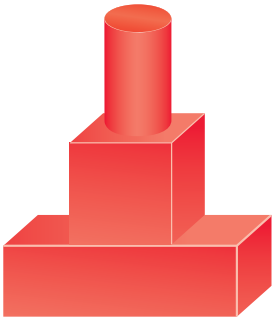
5



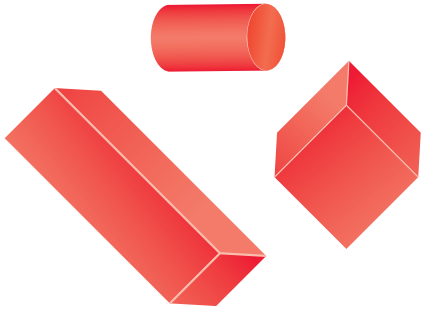


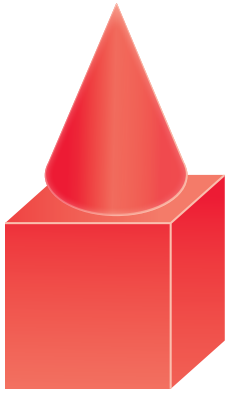
6



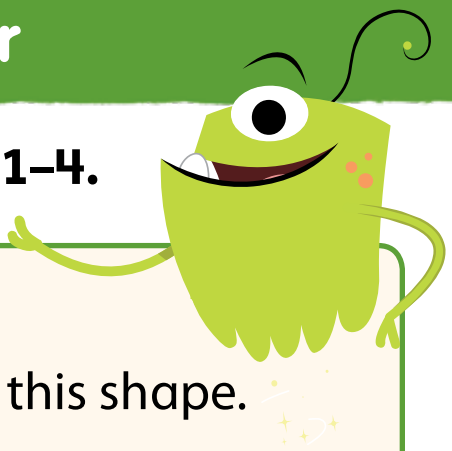


7





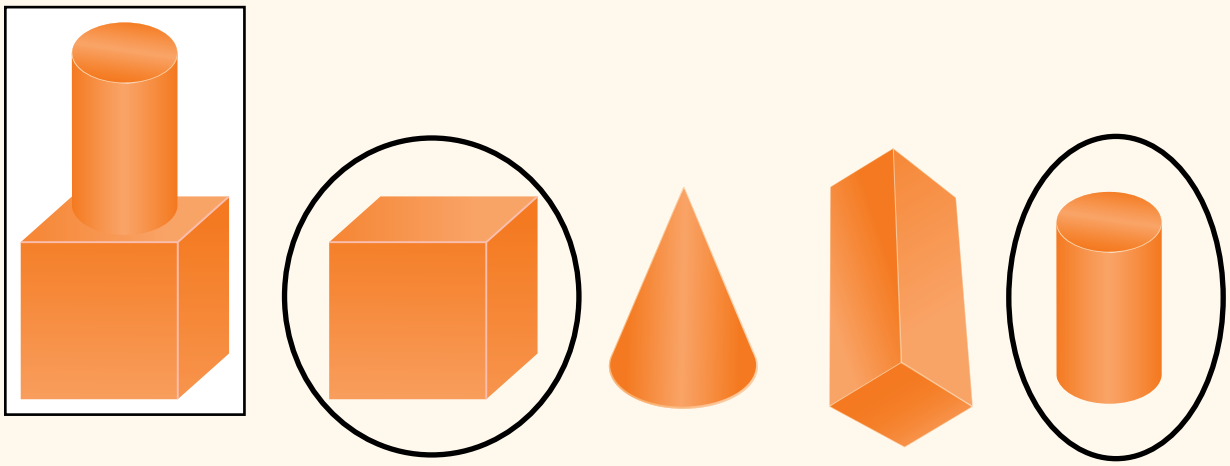
Practice Putting Shapes Together



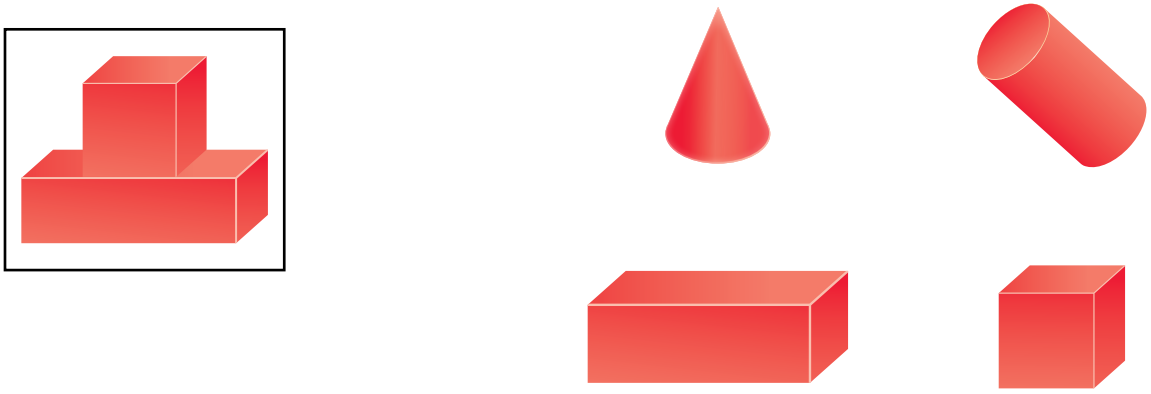
Look at the Example. Then solve problems 1–4.

Example

Circle the shapes that go together to make this shape.

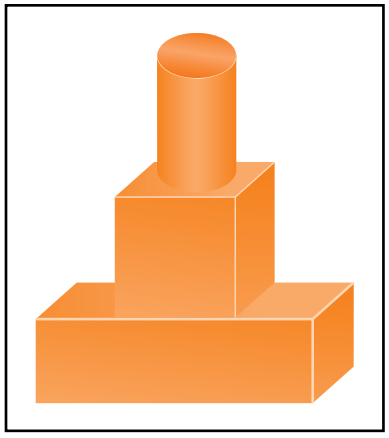


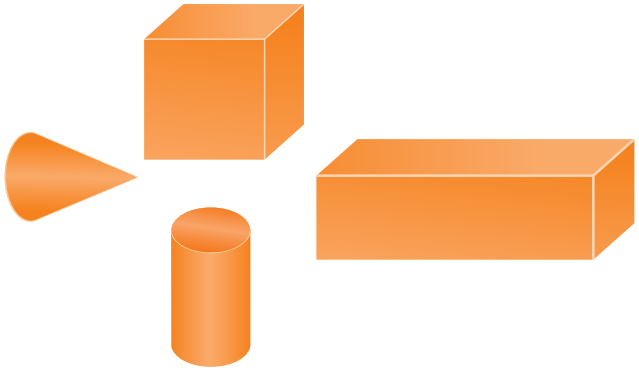
1 Circle the shapes that go together to make this shape.



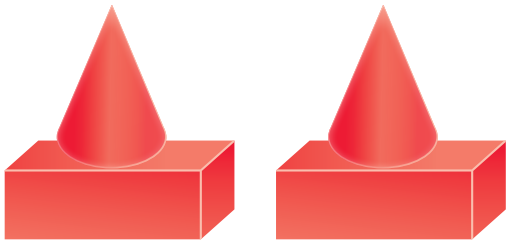
Name: _____

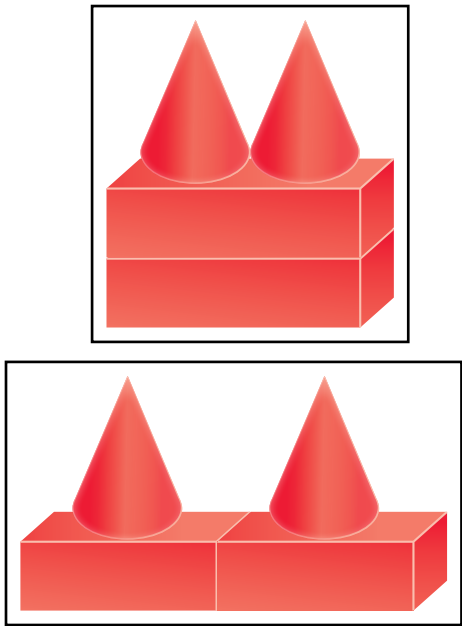
2 Circle the shapes that go together to make this shape.



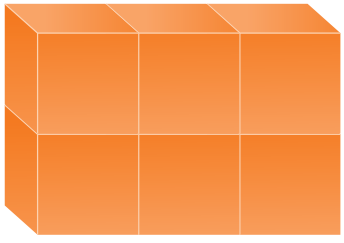


3 Circle the shape you can make if you put these two shapes together.





4 How many cubes make this shape?



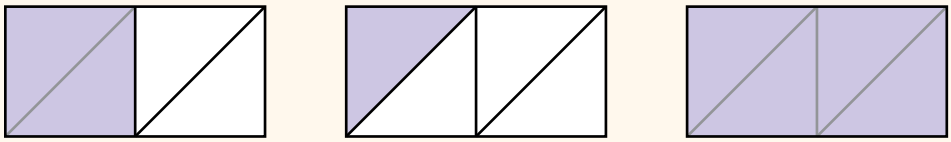
_____ cubes make the shape.

Refine Putting Shapes Together

Complete the Example. Then solve problems 1–5.

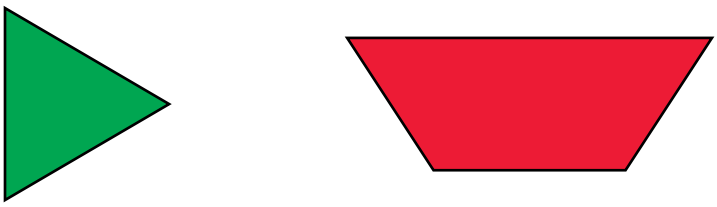
Example

What shapes do you see shaded purple here?

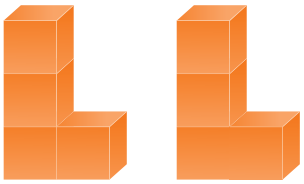


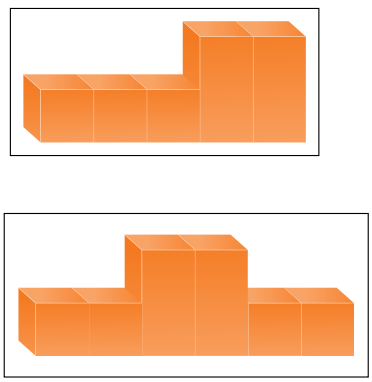
square triangle _____

1 Use these shapes to make a triangle. Draw lines and color to show how.

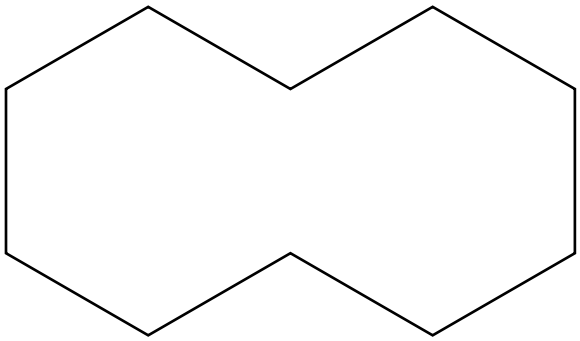


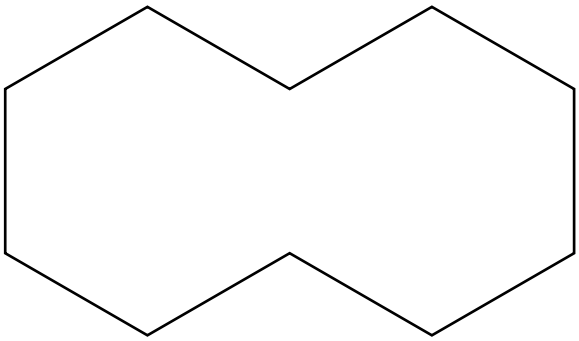
2 Circle the shape you can make if you put these two shapes together.



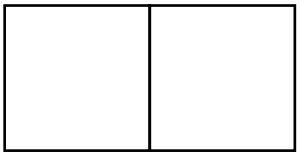


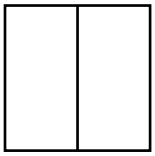
3 Draw lines and color to show 2 different ways to make this shape with pattern blocks.





4 Which shows a square made with 2 rectangles? Circle it.





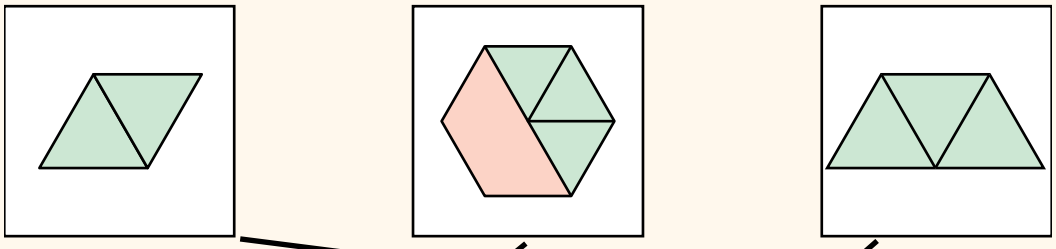
5 Buzz says any even number of squares can be used to make a larger square.
Is he right? How do you know?

Practice Putting Shapes Together

Look at the Example. Then solve problems 1–3.

Example

Draw lines to match the picture with the number of shapes that make it.



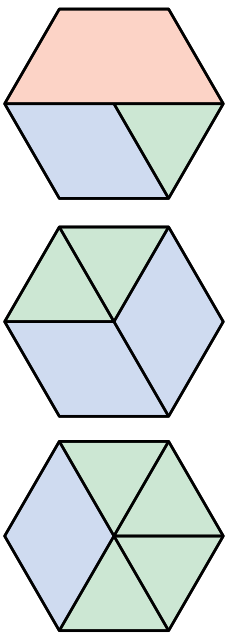
5 shapes

4 shapes

3 shapes

2 shapes

1 Draw lines to match the picture with the number of shapes that make it.



4

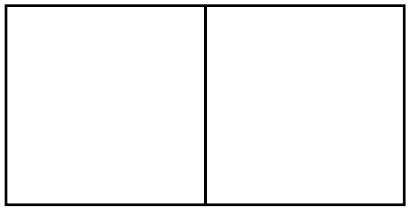
2

5

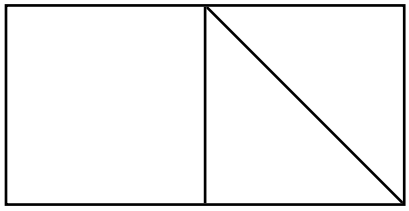
3

Name: _____

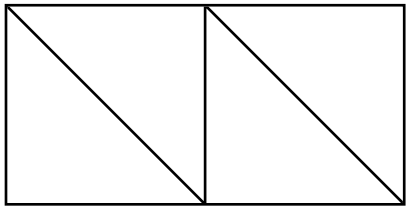
2 Draw lines to match each picture with the shapes that make it.



4 triangles



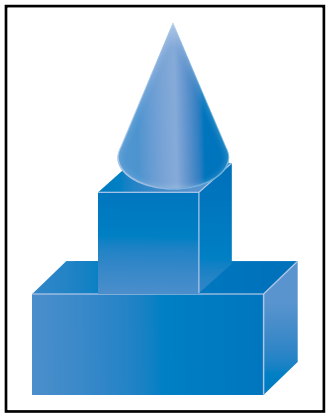
2 squares

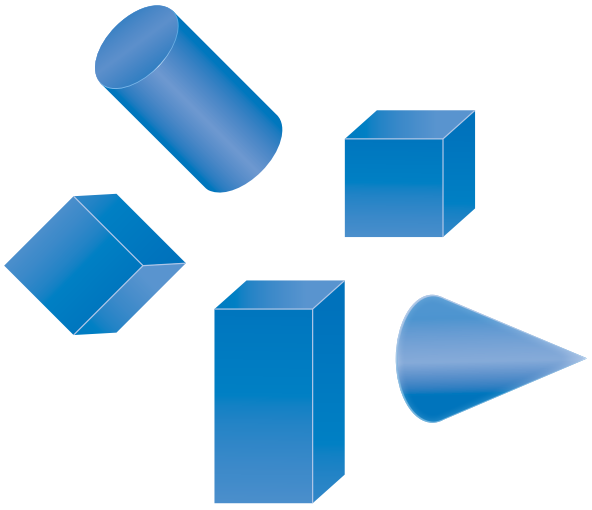


2 squares and 1 triangle

1 square and 2 triangles

3 Circle the shapes you could use to make this shape.





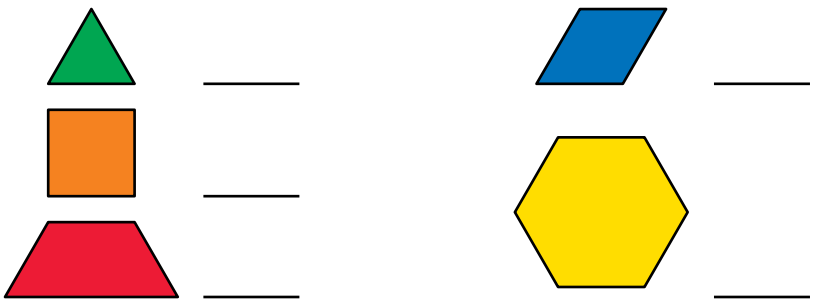
Refine Putting Shapes Together

Apply It

Solve problems 1–4.

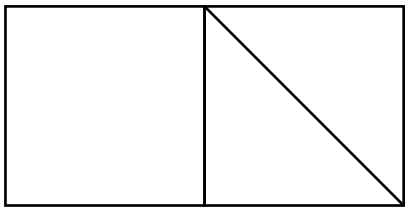
1 Use 4 or more pattern block shapes to make 2 new shapes. Draw them.

2 Circle one shape above that you made.
Write how many of each shape you used.

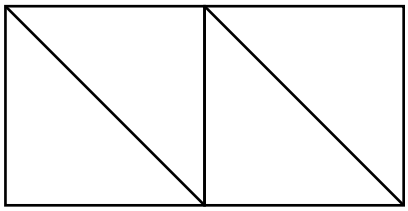


3 Color to show how to make this rectangle using other shapes.

Use 3 colors to show 3 shapes.



Use 4 colors to show 4 shapes.



4 Circle the shape you can make if you put these two shapes together.