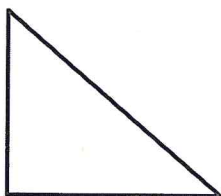


Name _____

Date _____

1. Identify the number of sides and angles for each shape. Circle each angle as you count, if needed.

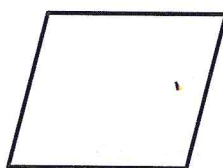
a.



_____ sides

_____ angles

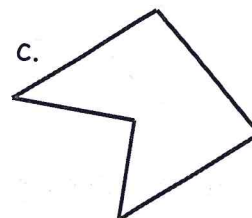
b.



_____ sides

_____ angles

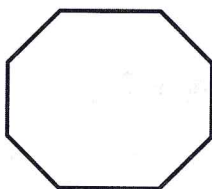
c.



_____ sides

_____ angles

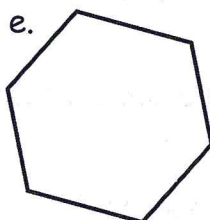
d.



_____ sides

_____ angles

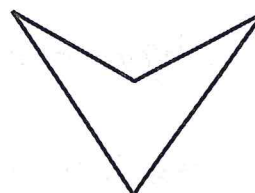
e.



_____ sides

_____ angles

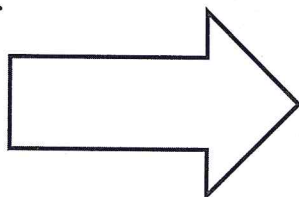
f.



_____ sides

_____ angles

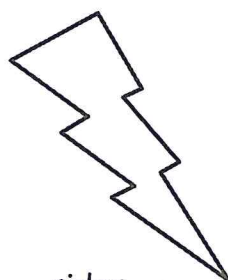
g.



_____ sides

_____ angles

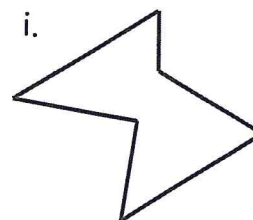
h.



_____ sides

_____ angles

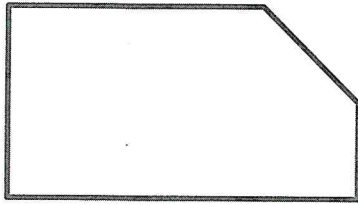
i.



_____ sides

_____ angles

1. Count the number of sides and angles to identify the polygon.



This polygon has 5 sides and 5 angles.
That makes it a pentagon!

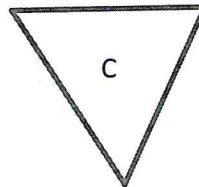
pentagon

2. Draw more sides to complete 2 examples of the polygon.

	Example 1	Example 2
Pentagon For each example, <u>3</u> lines were added. A pentagon has <u>5</u> total sides.		

3. Explain why both polygons C and D are triangles.

Both polygons have 3 sides and 3 angles.



Even though they look different, they are both triangles since they have 3 sides and 3 angles.

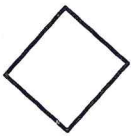
Name _____

Date _____

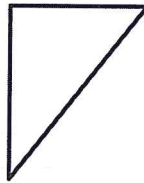
1. Count the number of sides and angles for each shape to identify each polygon. The polygon names in the word bank may be used more than once.

Hexagon	Quadrilateral	Triangle	Pentagon
---------	---------------	----------	----------

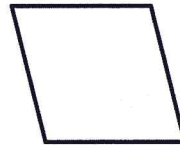
a.



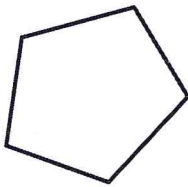
b.



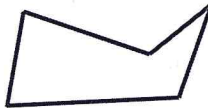
c.



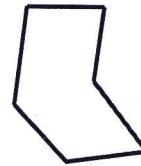
d.



e.



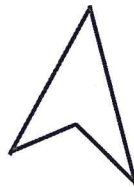
f.



g.



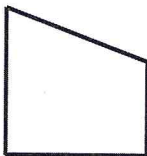
h.



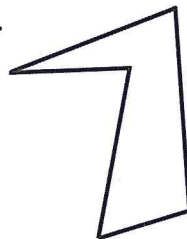
i.



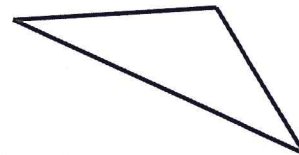
j.











k.



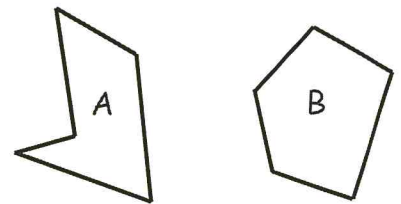
l.



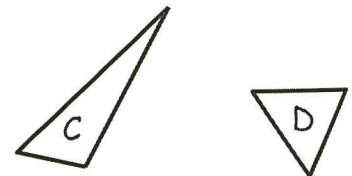
2. Draw more sides to complete 2 examples of each polygon.

	Example 1	Example 2
<p>a. Quadrilateral For each example, ___ lines were added. A quadrilateral has ___ total sides.</p>		
<p>b. Pentagon For each example, ___ lines were added. A pentagon has ___ total sides.</p>		
<p>c. Triangle For each example, ___ line was added. A triangle has ___ total sides.</p>		
<p>d. Hexagon For each example, ___ lines were added. A hexagon has ___ total sides.</p>		

3. Explain why both polygons A and B are pentagons.



4. Explain why both polygons C and D are triangles.

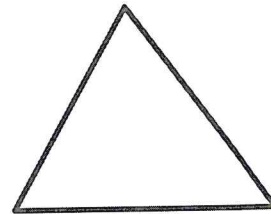


1. Use a straightedge to draw the polygon with the given attributes.

Draw a polygon with 3 angles.

Number of sides: 3

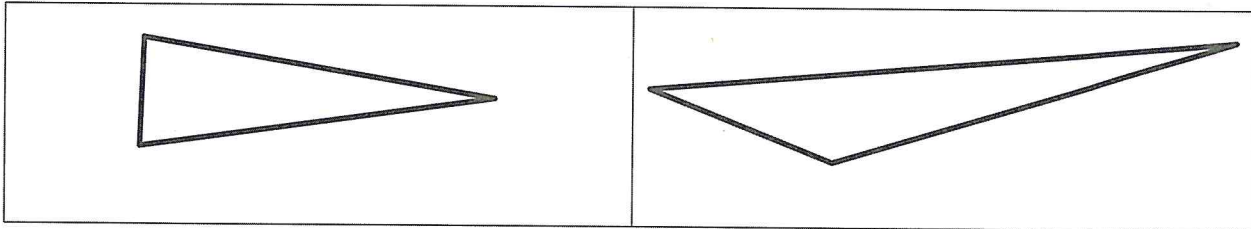
Name of polygon: triangle



When I draw a polygon with 3 angles, it also has 3 sides. That is a triangle!

2. Use your straightedge to draw 2 new examples of the polygon you drew for Problem 1.

Triangle



All triangles must have 3 sides and 3 angles. By changing the size of the angles and the length of the sides, I can make all kinds of different triangles! This one is long and skinny!

Name _____

Date _____

1. Use a straightedge to draw the polygon with the given attributes in the space to the right.

a. Draw a polygon with 4 angles.

Number of sides: _____

Name of polygon: _____

b. Draw a six-sided polygon.

Number of angles: _____

Name of polygon: _____

c. Draw a polygon with 3 angles.

Number of sides: _____

Name of polygon: _____

d. Draw a five-sided polygon.

Number of angles: _____

Name of polygon: _____

2. Use your straightedge to draw 2 new examples of each polygon that are different from those you drew on the first page.

a. Quadrilateral

--	--

b. Hexagon

--	--

c. Pentagon

--	--

d. Triangle

--	--

1. Use your ruler to draw 2 parallel lines that are not the same length.

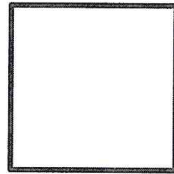


I know that parallel lines go in the same direction and never touch. I can draw parallel lines by placing my ruler on the paper and using both sides to draw 2 straight lines.

2. Draw a quadrilateral with 4 square corners.

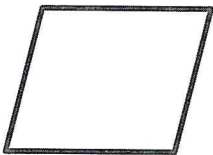


The square corners are in the shape of an L.



Both of these quadrilaterals have 4 square corners. That means both shapes are rectangles. The one on the right is a special rectangle called a square! It has 4 square corners *and* 4 sides that are the same length!

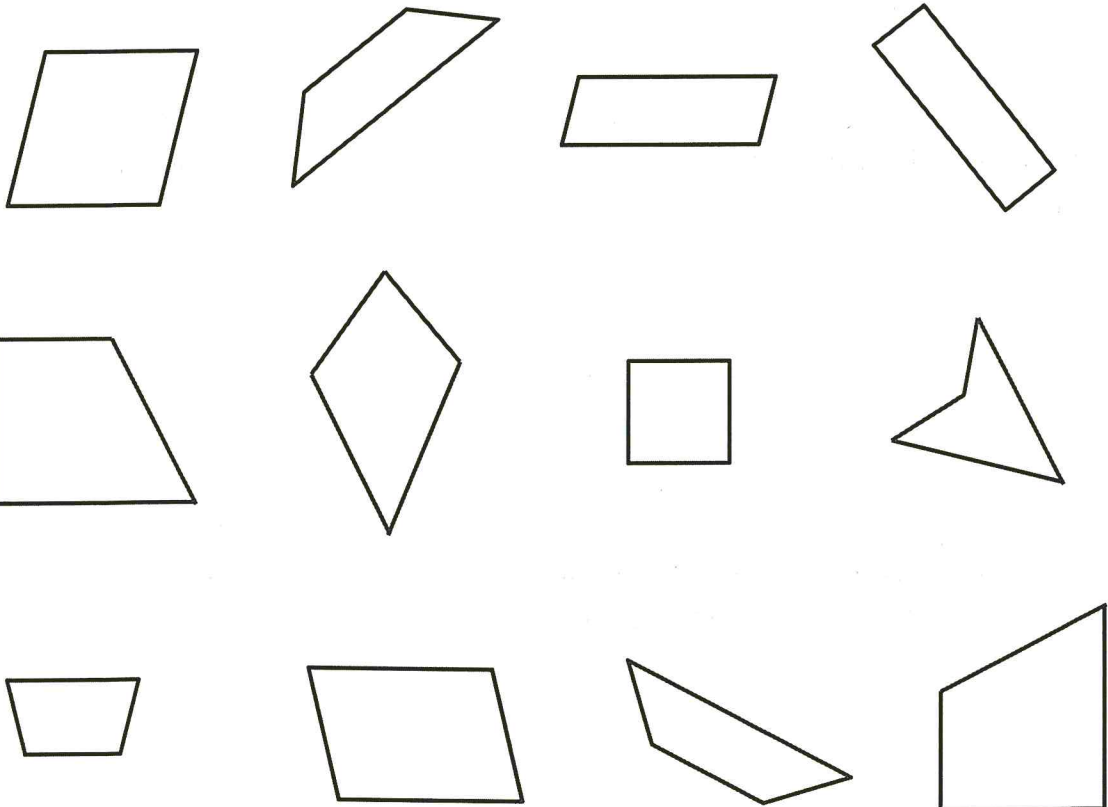
3. Draw a quadrilateral with two sets of parallel sides.



I know this is a quadrilateral because it has 4 sides and 4 angles. It has no square corners, so it can't be a rectangle. It does have 2 sets of parallel sides; it must be a parallelogram!

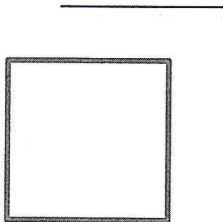
5. A square is a special rectangle. What makes it special?

6. Color each quadrilateral with 4 square corners and two sets of parallel sides red.
Color each quadrilateral with no square corners and no parallel sides blue.
Circle each quadrilateral with one or more sets of parallel sides green.



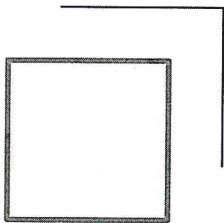
Draw a cube.

Step 1:



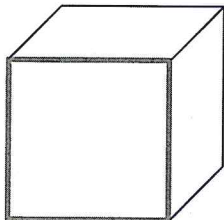
First I draw a square. Then, starting at the middle of the top edge, I draw a line that is parallel to and about the same length as the top edge.

Step 2:



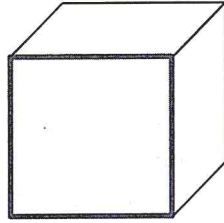
Next, I make a square corner with the right side parallel to the right edge.

Step 3:



Finally, I draw three lines to connect the three corners of the square face to the endpoints and corner of the lines I drew.

I count the edges by pointing to the ones I see and pointing to the ones I know are hiding! I count 12 edges!



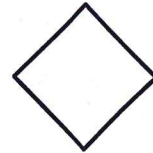
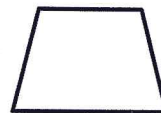
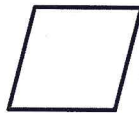
The corners are sharp. There are 4 corners on the front face and 4 corners on the back face. Together that makes 8 corners.

I see 3 faces, and I know 3 are hiding so that makes 6 altogether.

Name _____

Date _____

1. Circle the shapes that could be the face of a cube.



2. What is the most precise name of the shape you circled? _____

3. How many corners does a cube have? _____

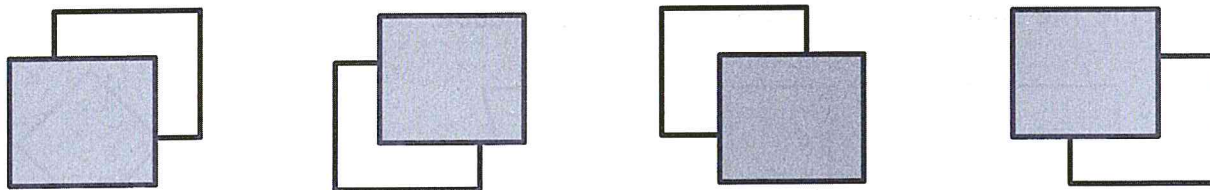
4. How many edges does a cube have? _____

5. How many faces does a cube have? _____

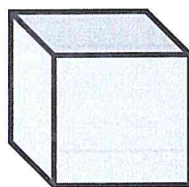
6. Draw 6 cubes, and put a star next to your best one.

First cube	Second cube
Third cube	Fourth cube
Fifth cube	Sixth cube

7. Connect the corners of the squares to make a different kind of drawing of a cube.



8. Patricia used the image of the cube below to count 7 corners. Explain where the 8th corner is hiding.

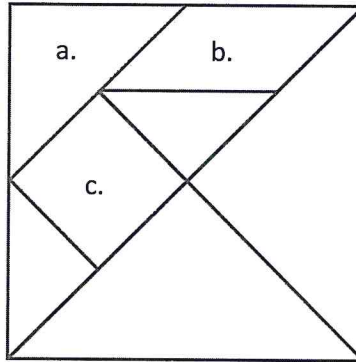


1. Identify each polygon labeled in the tangram as precisely as possible in the space below.

a. triangle

b. parallelogram

c. square

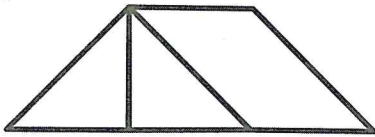


I know letter b is a parallelogram because it has 2 sets of parallel sides but no square corners! 3 sides and 3 angles makes a triangle!

I know letter c is a square. It has 4 square corners, 2 sets of parallel sides, and all the sides are equal in length!

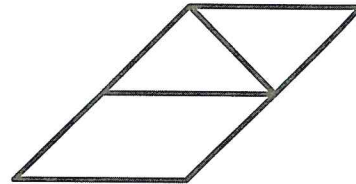
2. Use the parallelogram and the two smallest triangles to make the following polygons. Draw them in the space provided.

a. A quadrilateral with 1 pair of parallel sides



Look, I made a trapezoid! It has 4 straight sides, but they're not all the same length. I know it's a trapezoid because it has at least one pair of parallel sides.

b. A quadrilateral with no square corners



I know this one is a parallelogram. It has 2 pairs of parallel sides and no square corners. I can see a trapezoid hiding inside!

Name _____

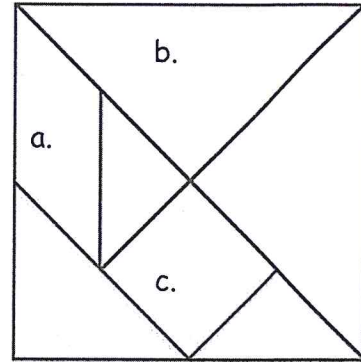
Date _____

1. Identify each polygon labeled in the tangram as precisely as possible in the space below.

a. _____

b. _____

c. _____



2. Use the square and the two smallest triangles of your tangram pieces to make the following polygons. Draw them in the space provided.

a. A triangle with 1 square corner.

b. A quadrilateral with 4 square corners.

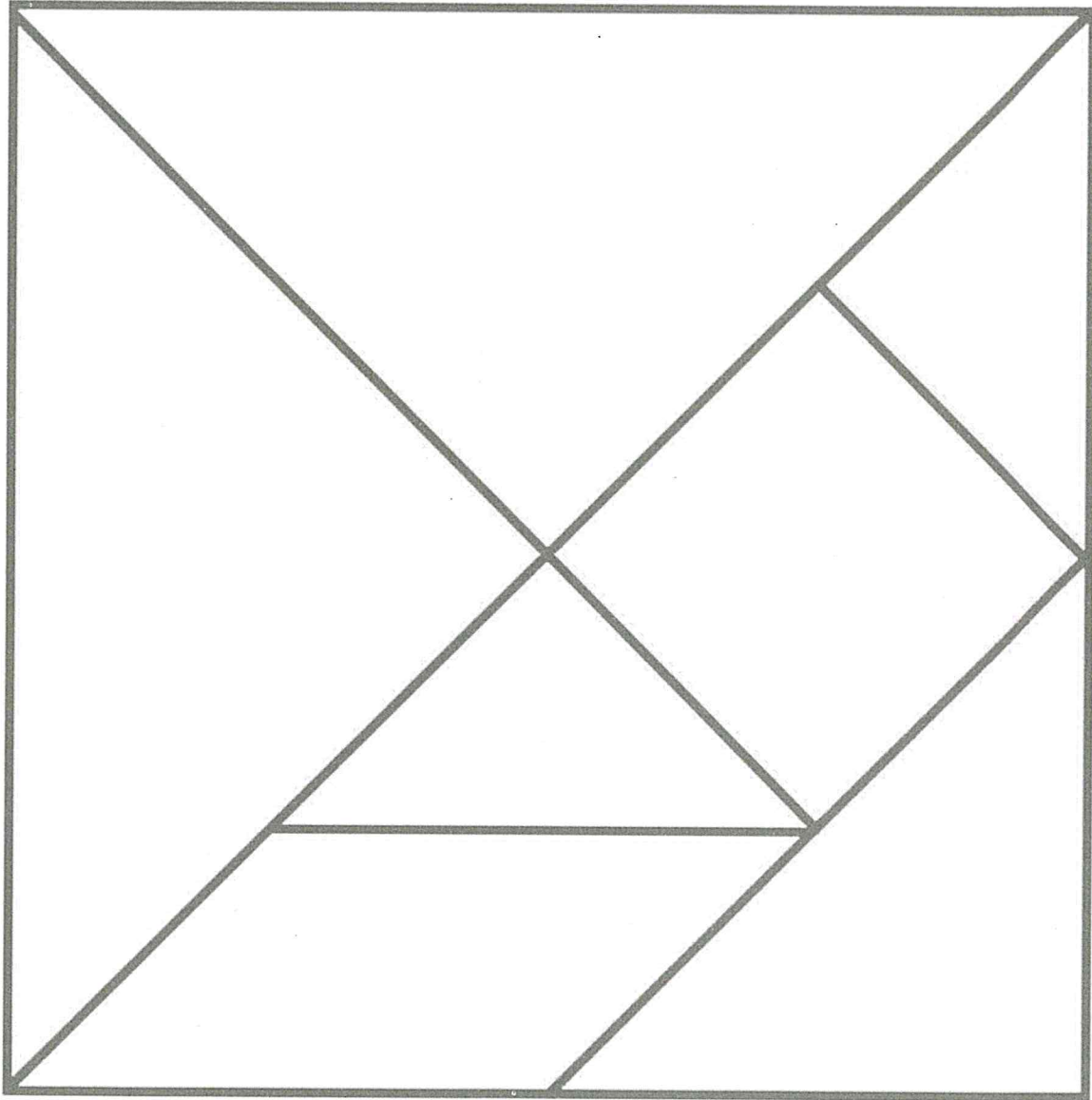
c. A quadrilateral with no square corners.

d. A quadrilateral with only 1 pair of parallel sides.

3. Rearrange the parallelogram and the two smallest triangles of your tangram pieces to make a hexagon. Draw the new shape below.

4. Rearrange your tangram pieces to make at least 6 other polygons! Draw and name them below.

Cut the tangram into 7 puzzle pieces.

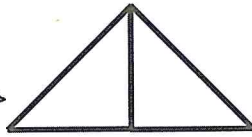


_____ tangram

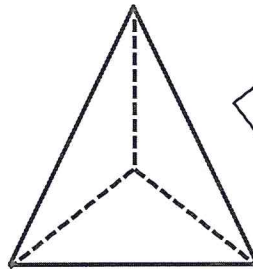
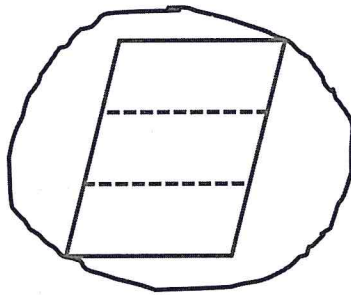
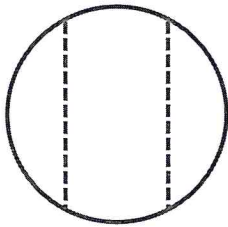
1. Solve the following puzzle using your tangram pieces. Draw your solutions in the space below.

Use the two smallest triangles to make one larger triangle.

The two small triangles that I use to make one big triangle are the same size. That means this triangle has two equal shares, or two halves!

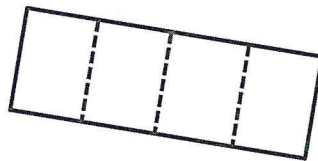


2. Circle the shapes that show thirds.



I know this triangle is not cut into thirds because all three parts are not equal shares. The bottom part is bigger than the other ones!

3. Examine the rectangle.



- a. How many equal shares does the rectangle have? 4
- b. How many fourths are in the rectangle? 4

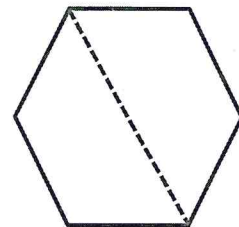
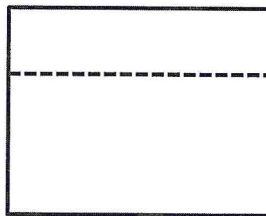
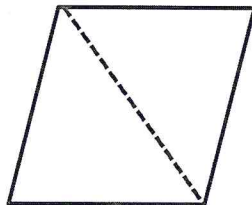
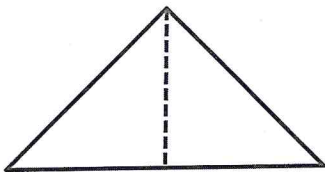
Name _____

Date _____

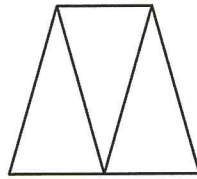
1. Solve the following puzzles using your tangram pieces. Draw your solutions in the space below.

<p>a. Use the two largest triangles to make a square.</p>	<p>b. Use the two smallest triangles to make a square.</p>
<p>c. Use the two smallest triangles to make a parallelogram with no square corners.</p>	<p>d. Use the two smallest triangles to make one larger triangle.</p>
<p>e. How many equal shares do the larger shapes in Parts (a-d) have?</p>	<p>f. How many halves make up the larger shapes in Parts (a-d)?</p>

2. Circle the shapes that show halves.

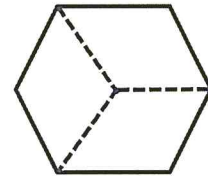
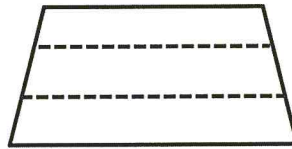
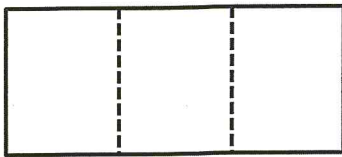


3. Examine the trapezoid.

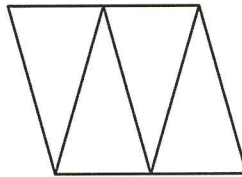


- a. How many equal shares does the trapezoid have? _____
- b. How many thirds are in the trapezoid? _____

4. Circle the shapes that show thirds.

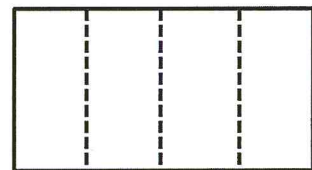
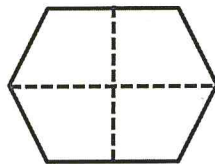
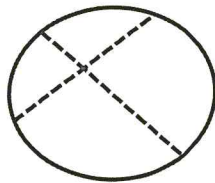


5. Examine the parallelogram.



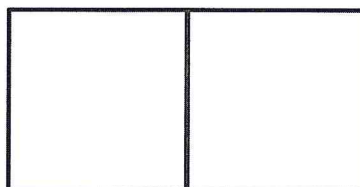
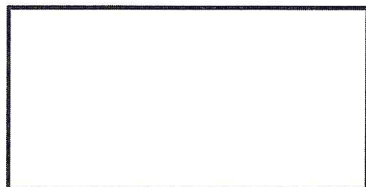
- a. How many equal shares does the shape have? _____
- b. How many fourths are in the shape? _____

6. Circle the shapes that show fourths.



1. Name the pattern block used to cover half the rectangle. square

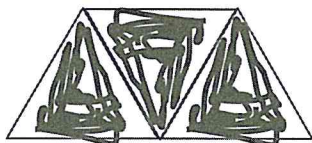
Sketch the 2 pattern blocks used to cover both halves of the rectangle.



I can cover the rectangle with 2 squares. The 2 equal shares, or halves, make one whole rectangle.

2. Draw 2 lines to make 3 triangles in the trapezoid below.

Knowing that a triangle has 3 sides helps me figure out where to draw my lines.



- a. Shade 1 triangle. Each triangle is 1 third (half / third / fourth) of the whole trapezoid.
- b. Shade 1 more triangle. Now, 2 thirds (halves / thirds / fourths) of the whole trapezoid are shaded.
- c. Shade 1 more triangle. 3 thirds is equal to 1 whole.

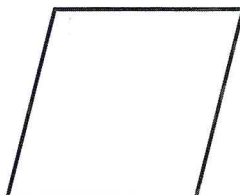
If 2 thirds of the trapezoid are shaded, I have 1 third left to shade. Then, 3 thirds will be shaded. That's 1 whole!

Name _____

Date _____

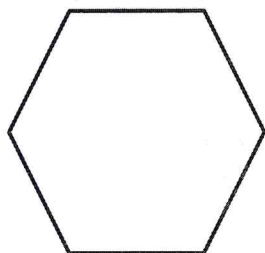
1. Name the pattern block used to cover half the rhombus. _____

Sketch the 2 pattern blocks used to cover both halves of the rhombus.



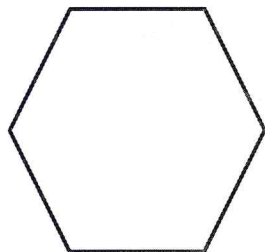
2. Name the pattern block used to cover half the hexagon. _____

Sketch the 2 pattern blocks used to cover both halves of the hexagon.



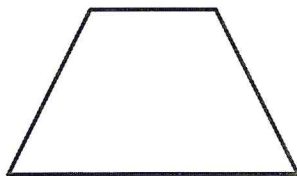
3. Name the pattern block used to cover 1 third of the hexagon. _____

Sketch the 3 pattern blocks used to cover thirds of the hexagon.

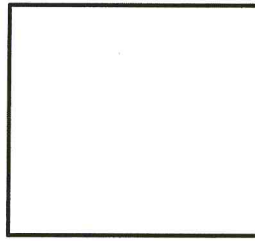


4. Name the pattern block used to cover 1 third of the trapezoid. _____

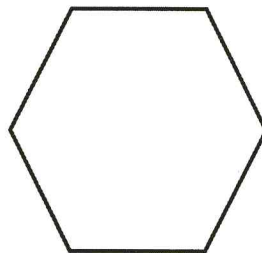
Sketch the 3 pattern blocks used to cover thirds of the trapezoid.



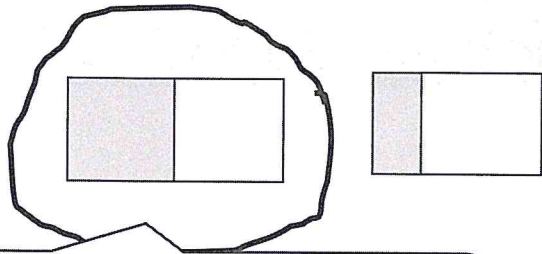
5. Draw 2 lines to make 4 squares in the square below.



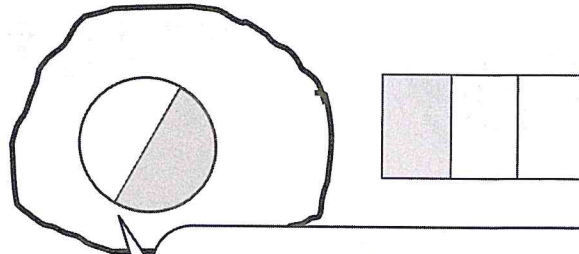
- a. Shade 1 small square. Each small square is 1 _____ (half / third / fourth) of the whole square.
- b. Shade 1 more small square. Now, 2 _____ (halves / thirds / fourths) of the whole square are shaded.
- c. And 2 fourths of the square is the same as 1 _____ (half / third / fourth) of the whole square.
- d. Shade 2 more small squares. _____ fourths is equal to 1 whole.
6. Name the pattern block used to cover 1 sixth of the hexagon. _____
Sketch the 6 pattern blocks used to cover 6 sixths of the hexagon.



1. Circle the shapes that have 2 equal shares with 1 share shaded.



I see 2 equal shares here. The 2 parts of the rectangle are exactly the same size, and one of them is shaded.



I can count the 2 equal shares, or halves, in this circle. I see they are equal because it looks like the circle was folded in half to make 2 parts that are exactly the same.

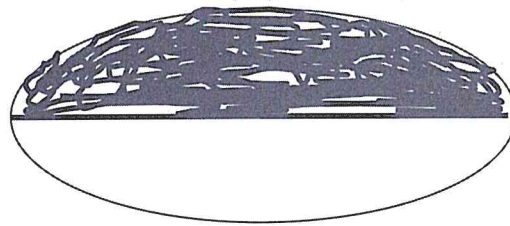
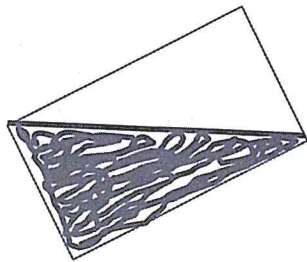
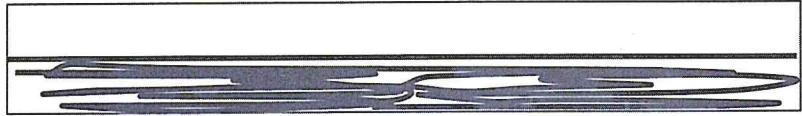
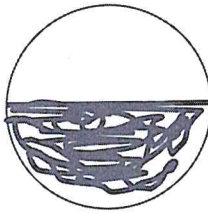
2. Shade 1 half of the shapes that are split into 2 equal shares. One has been done for you.

<p>a.</p>	<p>b.</p>	<p>c.</p>	<p>d.</p>
-----------	-----------	-----------	-----------

This rectangle does not have 2 equal shares. The part on the left is much smaller.

This rectangle has equal shares, but it is partitioned into 3 parts, not 2.

3. Partition the shapes to show halves. Shade 1 half of each. Compare your halves to your partner's.

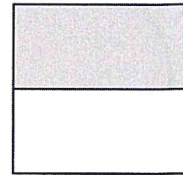
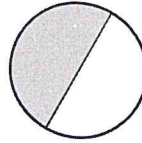
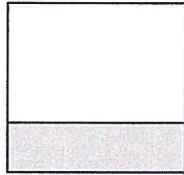
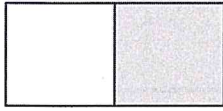


I can partition, or divide, the shape into halves by drawing a line right through the center, as if I have folded the shape in half. Then, I shade in 1 of the 2 equal shares.

Name _____

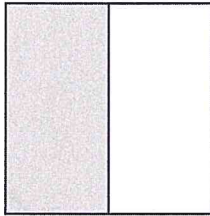
Date _____

1. Circle the shapes that have 2 equal shares with 1 share shaded.

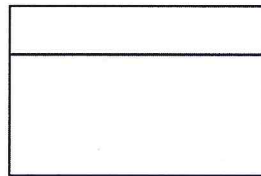


2. Shade 1 half of the shapes that are split into 2 equal shares. One has been done for you.

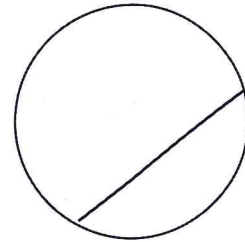
a.



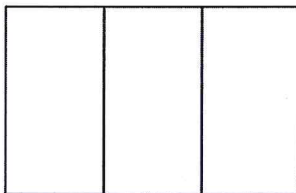
b.



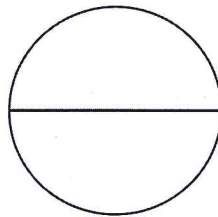
c.



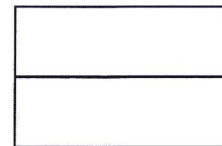
d.



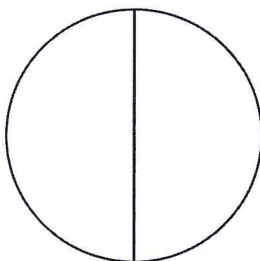
e.



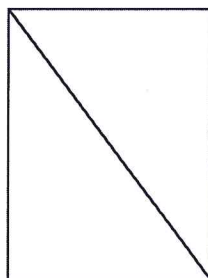
f.



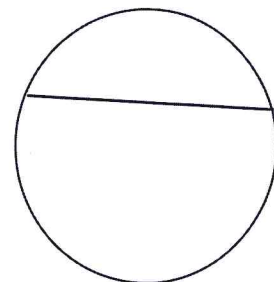
g.



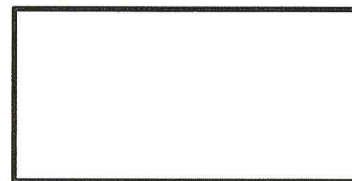
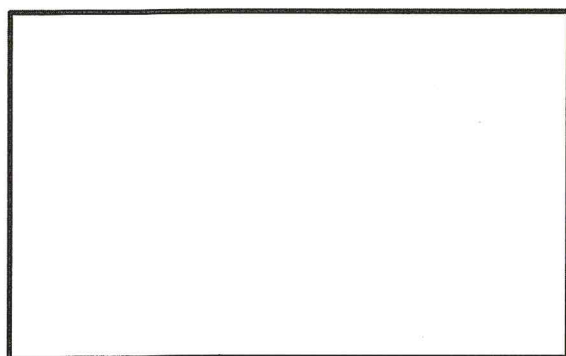
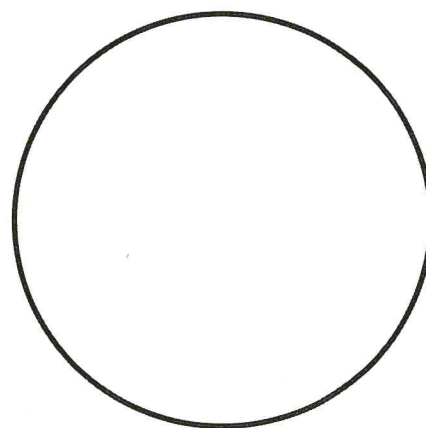
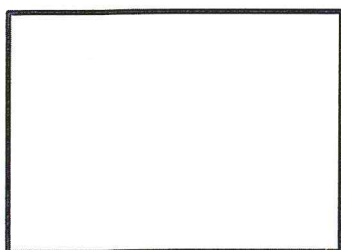
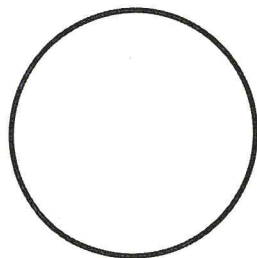
h.



i.

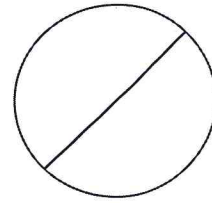
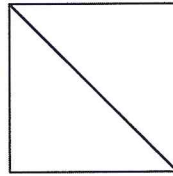
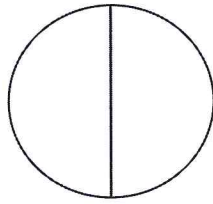
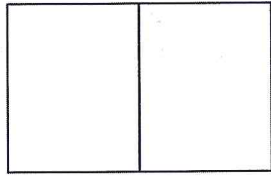


3. Partition the shapes to show halves. Shade 1 half of each.

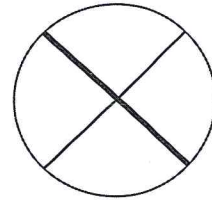
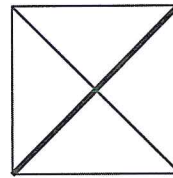
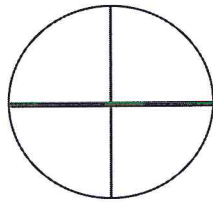
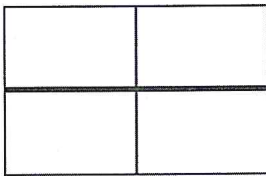


I know that these shapes show halves because each shape has 2 equal shares.

1. Do the shapes below show halves or thirds? halves

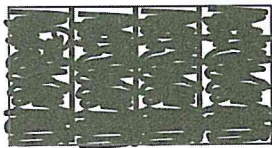


Draw 1 more line to partition each shape into fourths.



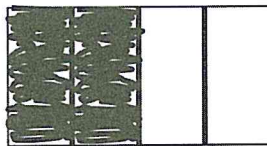
I can partition this shape into fourths by drawing another diagonal line from the opposite corners. That way, there are 4 equal shares!

2. Partition each rectangle into fourths. Then, shade the shapes as indicated.



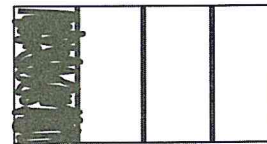
4 fourths

I shade all four to show 4 fourths. 4 fourths is the same as 1 whole!



2 fourths

I can show 2 fourths by shading two parts.



1 fourth

To show 1 fourth, I just shade 1 part!

3. Split the granola bar below so that Lisa, MJ, and Jessa all have an equal share.
Label each student's share with her name.

What fraction of the granola bar did the girls get in all?

3 thirds



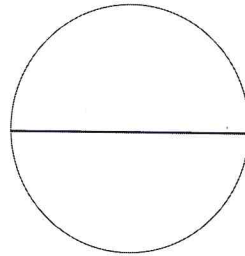
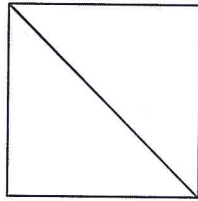
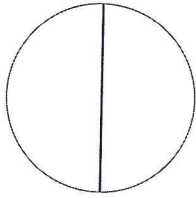
They shared the whole granola bar! That is 3 thirds!

I split the bar into 3 equal shares because there are 3 people eating it!

Name _____

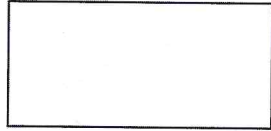
Date _____

1. a. Do the shapes below show halves or thirds? _____

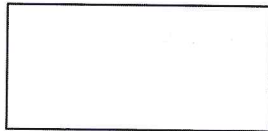


- b. Draw 1 more line to partition each shape above into fourths.

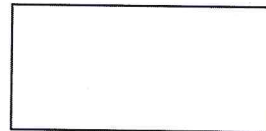
2. Partition each rectangle into thirds. Then, shade the shapes as indicated.



2 thirds

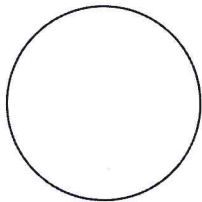


1 third

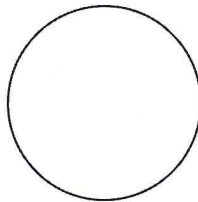


3 thirds

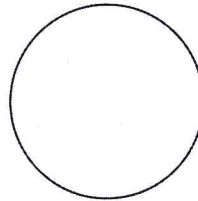
3. Partition each circle into fourths. Then, shade the shapes as indicated.



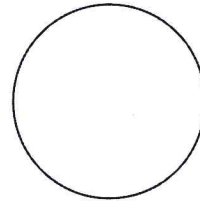
1 fourth



3 fourths



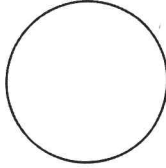
4 fourths



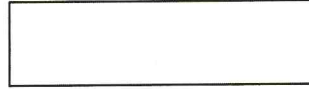
2 fourths

4. Partition and shade the following shapes. Each rectangle or circle is one whole.

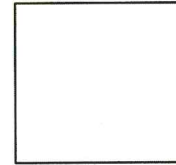
a. 1 half



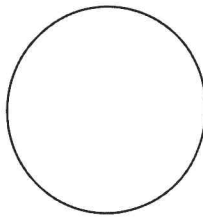
b. 1 fourth



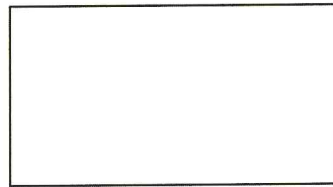
c. 1 third



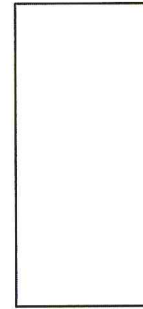
d. 2 fourths



e. 2 halves



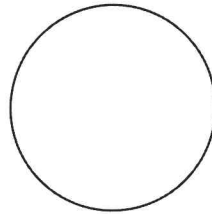
f. 2 thirds



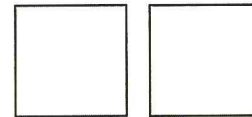
g. 3 thirds



h. 3 fourths



i. 3 halves



5. Split the pizza below so that Shane, Raul, and John all have an equal share. Label each student's share with his name.

What fraction of the pizza did the boys get in all?

