

Grade 2 - Shapes and Equal Shares - Lesson

Common Core 2.G.A.1, 2.G.A.2, 2.G.A.3 · maths-pdf.fr/en/

This **shapes equal shares lesson** for 2nd Grade covers shapes and equal shares (Common Core 2.G.A.1, 2.G.A.2, 2.G.A.3), with a free PDF to print.

A polygon is a flat shape with straight sides. A triangle has 3 sides, a quadrilateral has 4, a pentagon has 5, and a hexagon has 6. A cube is a solid with 6 square faces. Equal shares cut a whole into parts of the same size: halves, thirds, or fourths.

Grade 2 · Common Core State Standards: **2.G.A.1, 2.G.A.2, 2.G.A.3**

Key facts in this shapes equal shares lesson

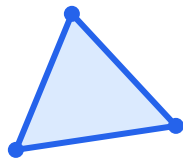
Key facts

- Name a polygon by counting its sides: 3 triangle, 4 quadrilateral, 5 pentagon, 6 hexagon.
- A polygon has the same number of angles as sides.
- A cube has 6 faces and every face is a square.
- Count a rectangle of squares by rows: add the number in one row once for each row.
- 2 halves, 3 thirds, or 4 fourths each make one whole, and equal shares are the same size.

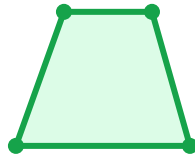
What are the names of shapes with straight sides?

A shape with straight sides that meet at corners is called a **polygon**. To name a polygon, count its sides. A corner where two sides meet is called an **angle**, so a polygon has as many angles as sides.

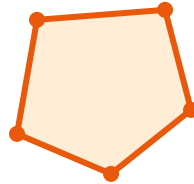
Sides	Angles	Name
3	3	triangle
4	4	quadrilateral
5	5	pentagon
6	6	hexagon



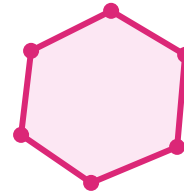
triangle



quadrilateral



pentagon



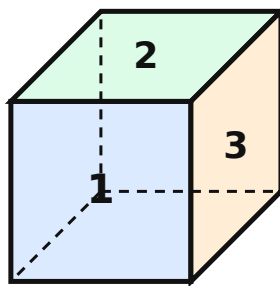
hexagon

Count the sides to name the polygon: 3, 4, 5 and 6 sides.

Shapes can look different and still have the same name. A tall, skinny triangle and a short, wide triangle both have 3 sides.

What is a cube?

A cube is a solid shape, like a game die. Every flat side of a solid is called a **face**. All the faces of a cube are squares, and a cube has 6 of them. In a drawing you see only 3 faces. The other 3 are hidden behind.



1 = front face

2 = top face

3 = right face

Dashed lines: hidden edges

A cube has 6 square faces: 3 you can see and 3 hidden ones.

How do you split a rectangle into rows and columns?

Rows go across, from left to right. **Columns** go up and down. When equal squares fill a rectangle with no gaps and no overlaps, you can count them by rows.

	Col 1	Col 2	Col 3	Col 4
Row 1				
Row 2				
Row 3				

3 rows with 4 squares in each row: $4 + 4 + 4 = 12$.

1. Count the rows. Here there are 3.

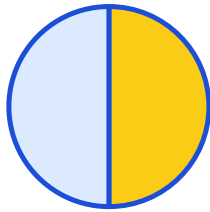
- Count the squares in one row. Here there are 4.
- Add that number once for every row: $4+4+4=12$.

The rectangle has 12 equal squares.

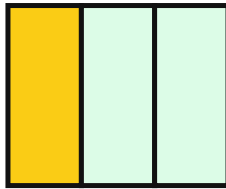
What are halves, thirds, and fourths?

Equal shares

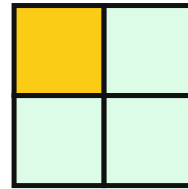
Equal shares are parts of a whole that are the same size. 2 equal shares are **halves**. 3 equal shares are **thirds**. 4 equal shares are **fourths**, also called quarters.



2 halves



3 thirds

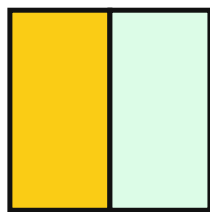


4 fourths

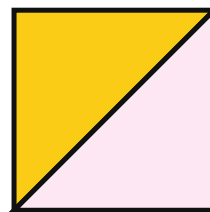
One shaded share of each whole: one half, one third and one fourth.

Put all the shares back together and you get the whole: 2 halves, 3 thirds or 4 fourths make one whole. The more shares you cut, the smaller each share is. A half is bigger than a third, and a third is bigger than a fourth.

Equal shares must be the same size, but they do not have to be the same shape.



Square 1



Square 2

Both squares are cut into halves. The halves are different shapes but the same size.

Shapes equal shares lesson: questions and answers

How do you name a shape by its sides?

Count the straight sides. Three sides is a triangle, four is a quadrilateral, five is a pentagon, and six is a hexagon. Mark each corner with a dot as you count so you do not skip one.

How many faces does a cube have?

A cube has 6 faces, and every face is a square. In a picture only 3 faces show. The other 3 are hidden at the back, the bottom, and the left side.

What is the difference between a row and a column?

A row goes across from left to right. A column goes up and down. A rectangle with 3 rows and 4 columns has 12 squares.

Can halves look different from each other?

Yes. Halves must be the same size, but they can be different shapes. A square cut straight down the middle and a square cut corner to corner both make two equal halves.

Which is bigger, a third or a fourth?

A third is bigger. When a whole is cut into 3 equal shares, each share is larger than when the same whole is cut into 4 equal shares.

How to use this shapes equal shares lesson

Read the definitions first, then follow the worked method line by line and redo the example on paper without looking. When every step makes sense, move on to the worksheet, then check yourself with the quiz.

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