Triangles

Video Transcript

Triangles are a basic building block for all 2-dimensional and 3-dimensional shapes. If you can understand how triangles are put together, you can extend that knowledge to all other shapes.

For example, if you draw two right triangles of the same size, rotate one of them 180° degrees, then connect them together, you will form a rectangle. This allows us to apply angle or area formulas for triangles to angle or area formulas for rectangles.

Another example uses equilateral triangles. These are triangles that have the same length of all of their sides. If you arrange the tip of six equilateral triangles to touch, you can make a hexagon. If we can find the area of one of those triangles, we can multiply it by 6 to find the area of the whole hexagon.

Right triangles are useful when building basic shapes or studying the relationship between angles and sides. You may have even seen a construction worker using a special, right triangle ruler to measure an object. An important branch of math that uses right triangles to study the relationship between sides and angles of triangles is called trigonometry.

We can use basic shapes to model objects all around us. Look around you, and you might start to see shapes. If you are sitting in a room, you are surrounded by rectangle walls and a ceiling. Maybe you drive a car? The wheels can be modeled using circles. You are looking at a monitor right now. It might be shaped like a rectangle; but, you might notice that when monitors are sold they are measured diagonally. Right triangles can be used to find how long that diagonal is by measuring the length and width of your monitor.
What about 3-dimensional shapes? With four triangles forming a roof and one square forming a base, we can form the mighty Egyptian Pyramids of Giza.

If you are getting a little hungry, we could look for a can of peaches. If you look closely, that can has two circle lids and a curved, rectangle connecting them together to form a cylinder.

Do you like shipping and receiving items from a thrifty online purchase? Then you can appreciate combining six different sized rectangles to form the box the items are shipped in.

Once you start breaking objects down into their basic parts, you can start understanding how we can put objects together. It all starts with our basic building block, the triangle.

Look around you. What are other examples of basic shapes being used to form everyday items?

**About this transcript:**

- Transcript title: Triangles
- Corresponding Lesson: Angles, Triangles, and Pythagorean Theorem
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