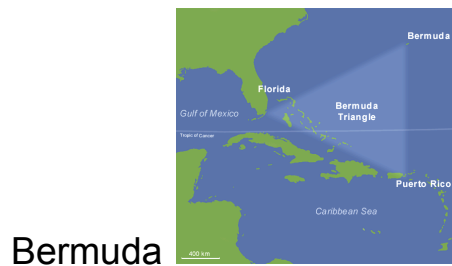
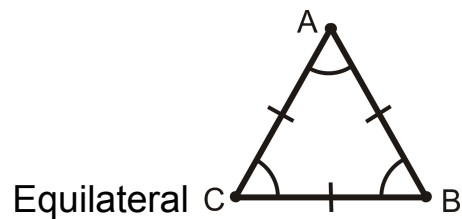
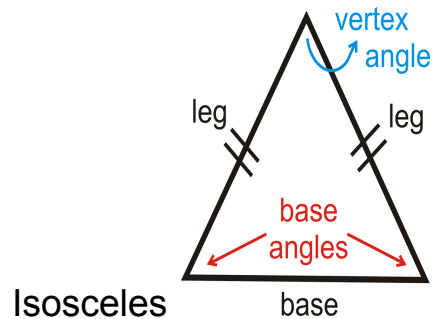


Lesson 7.01 Isosceles and Equilateral Triangles: Proofs

Types of Triangles:



Benchmark(s):

9.3.3.3 Know and apply properties of equilateral, isosceles and scalene triangles to solve problems and logically justify results.

Essential Question(s):

What are the different types of triangles we work with and what properties do they have?

Learning Target(s):

I can identify whether a triangle is scalene, isosceles, or equilateral.

I can apply the properties of isosceles and equilateral triangles to find unknown values.

Vocabulary/Theorems:

Isosceles Triangle--A triangle with exactly two sides congruent

Equilateral Triangle--A triangle with all sides congruent

Legs--The congruent sides of an isosceles triangle

Base--The non-congruent side of an isosceles triangle

Vertex Angle--The non-congruent angle in an isosceles triangle

Base Angles--The congruent angles in an isosceles triangle

Isosceles Triangle Theorem--If a triangle has two sides congruent, then the angles opposite the two sides are congruent to each other.

Converse of the Isosceles Triangle Theorem--If a triangle has one pair of congruent angles, then the sides opposite the congruent angles are congruent to each other.

Equilateral Triangle Theorem: If a triangle has three congruent sides, then the triangle has three congruent angles.

Show Me What You're Working With

Now that we know all the facts about isosceles and equilateral triangles, it's time to put that knowledge to use. Once we know we are working with one of these special triangles, we get a whole lot of extra information. Since we are all amazing mathematicians trying to prove all the world's proofs, the facts about isosceles and equilateral triangles are going to help us get to conclusions faster. First of all, let's take a look at the theorems and why they work by watching the two videos:

Proof of Isosceles Triangle Theorem

Proof of Equilateral Triangle Theorem

Now that you know how and why they work, here's a video with a few examples of Proofs with Isosceles and Equilateral Triangles.

You all ready for this? Let's get our practice on with these great Isosceles and Equilateral Triangle Practice Problems with Proofs.