4.3   Isosceles and Equilateral Triangles
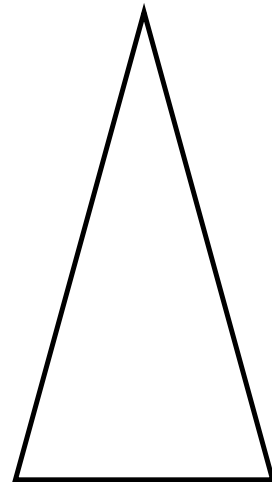
Objective: Use properties of isosceles and equilateral triangles.

The congruent sides of an isosceles triangle

   are called <u>legs</u>.
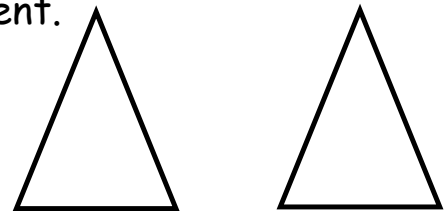
The other side is called the <u>base</u>.

The two angles formed by the base of

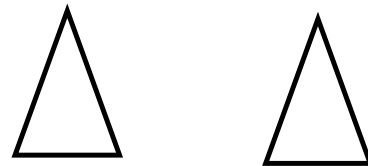   the triangle are called the <u>base angles</u>.

The angle included in the legs is called

   the <u>vertex angle</u>.

Base Angles Theorem: If two sides of a triangle are congruent, then the angles opposite them are congruent.

Converse of the Base Angles Theorem: If two angles of a triangle are congruent, then the sides opposite them are congruent.

Checkpoint at the bottom of page 186.

Equilateral Theorem: If a triangle is equilateral, then it is equiangular.

Equiangular Theorem: If a triangle is equiangular, then it is equilateral.

Example: Find the values of the variables.

$3x$

$2x + 10$

$4y$

7 7

$3z$

7