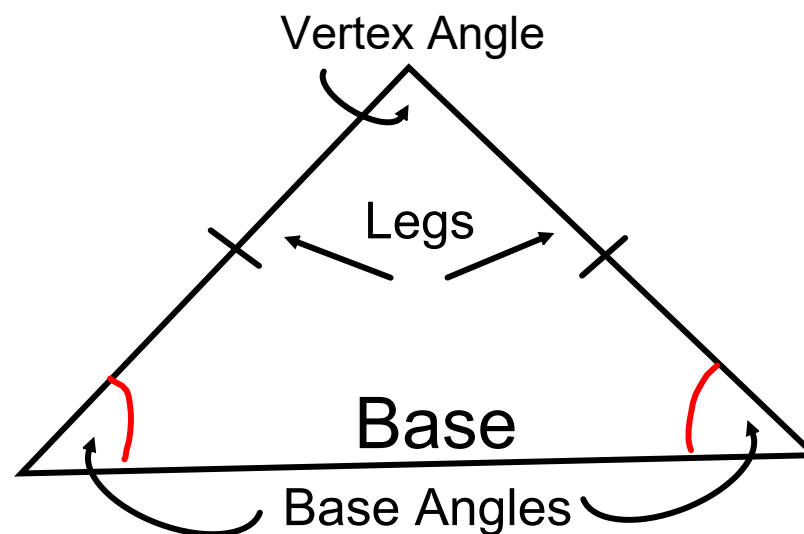


## Section 4-5: Isosceles & Equilateral Triangles

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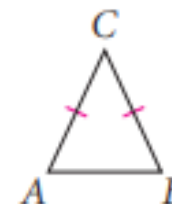
# Isosceles Triangles



**Theorem 4-3****Isosceles Triangle Theorem**

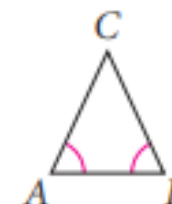
If two sides of a triangle are congruent, then the angles opposite those sides are congruent.

$$\angle A \cong \angle B$$

**Theorem 4-4****Converse of Isosceles Triangle Theorem**

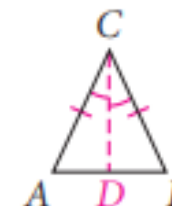
If two angles of a triangle are congruent, then the sides opposite the angles are congruent.

$$\overline{AC} \cong \overline{BC}$$

**Theorem 4-5**

The bisector of the vertex angle of an isosceles triangle is the perpendicular bisector of the base.

$$\overline{CD} \perp \overline{AB} \text{ and } \overline{CD} \text{ bisects } \overline{AB}.$$



# Corollary: A statement that follows immediately from a Theorem.

Don't copy this, just know what it means. →

Dictionary

Search for a word



cor·ol·lar·y

/ˈkɒr.əl.ər.i, ˈkær.əl.ər.i/



Learn to pronounce

*noun*

a proposition that follows from (and is often appended to) one already proved.

*adjective*

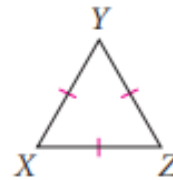
forming a proposition that follows from one already proved.

## Corollary

### Corollary to Theorem 4-3

If a triangle is equilateral, then the triangle is equiangular.

$$\angle X \cong \angle Y \cong \angle Z$$



## Corollary

### Corollary to Theorem 4-4

If a triangle is equiangular, then the triangle is equilateral.

$$\overline{XY} \cong \overline{YZ} \cong \overline{ZX}$$



Practice:

Section 4-5 WS