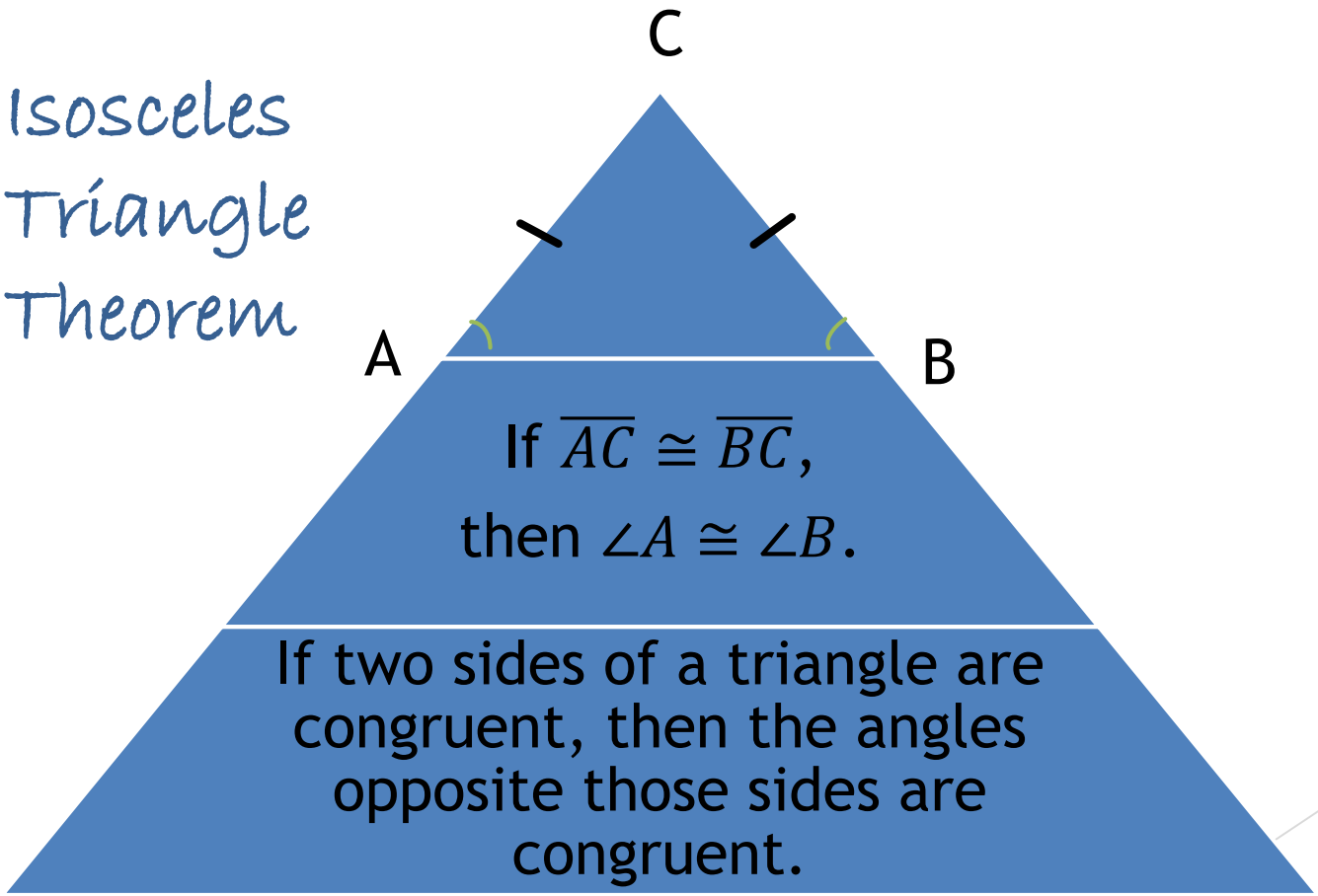
4-9
Isosceles and Equilateral Triangles

To use and apply theorems about isosceles and equilateral triangles

OBJECTIVE

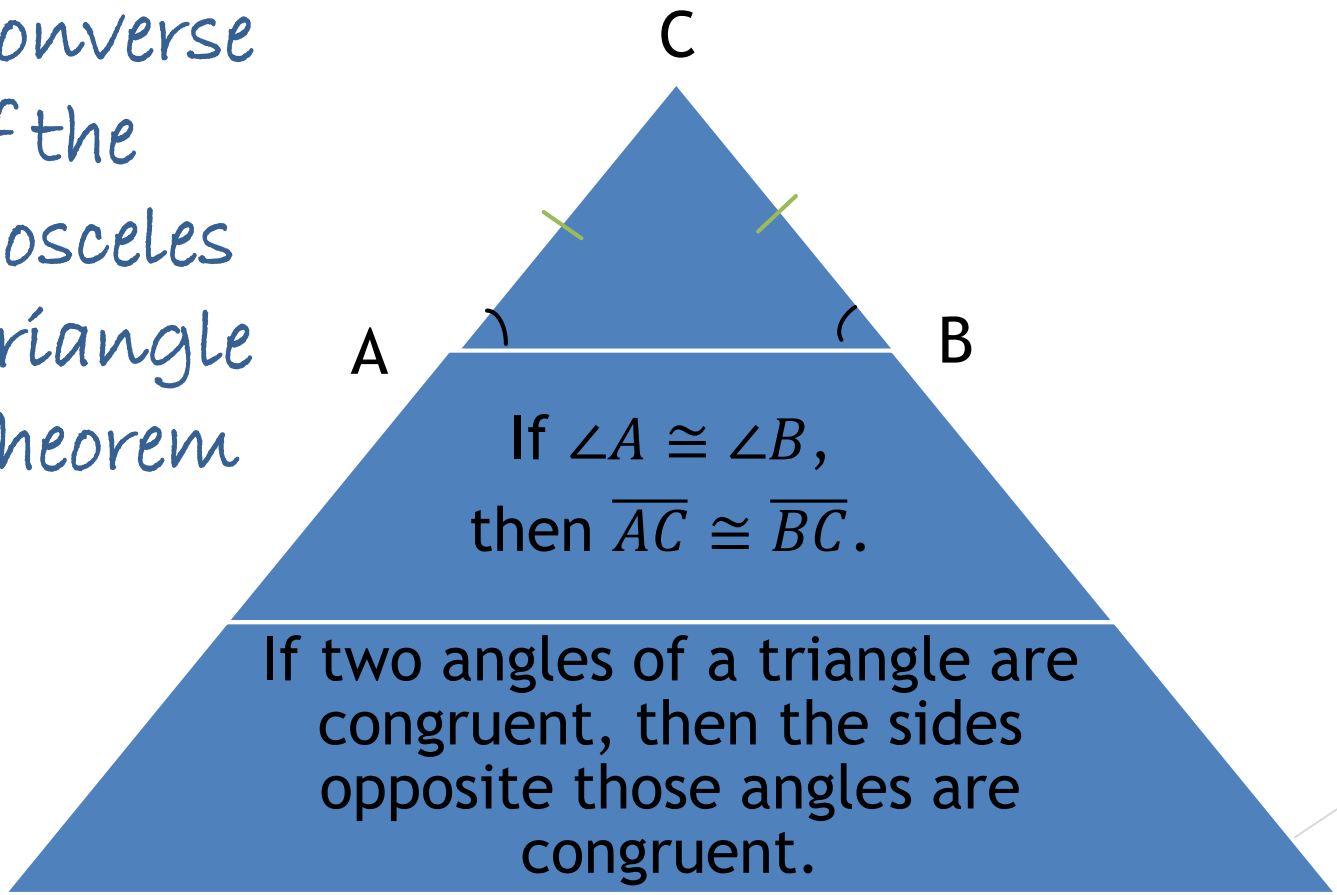
KEY CONCEPT

Isosceles Triangle Theorem



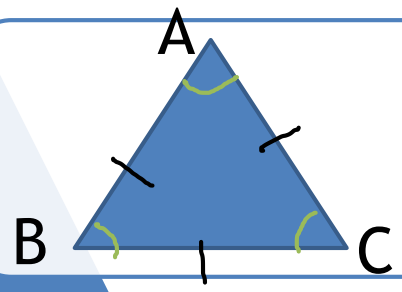
KEY CONCEPT

Converse of the Isosceles Triangle Theorem



KEY CONCEPT

Corollary to Isosceles Triangle Theorem



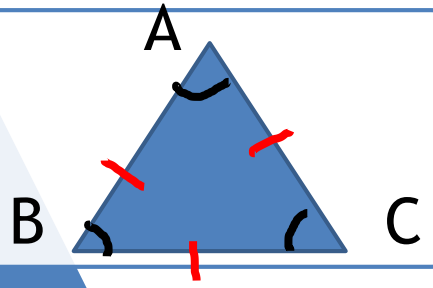
If $\overline{AB} \cong \overline{BC} \cong \overline{AC}$,

then $\angle A \cong \angle B \cong \angle C$.

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

KEY CONCEPT

Corollary to Converse of Isosceles Triangle Theorem



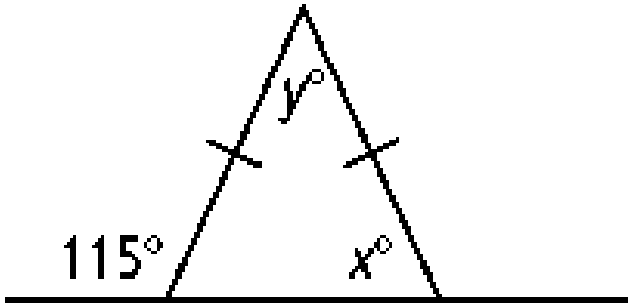
If $\angle A \cong \angle B \cong \angle C$,

then $\overline{AB} \cong \overline{BC} \cong \overline{AC}$.

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

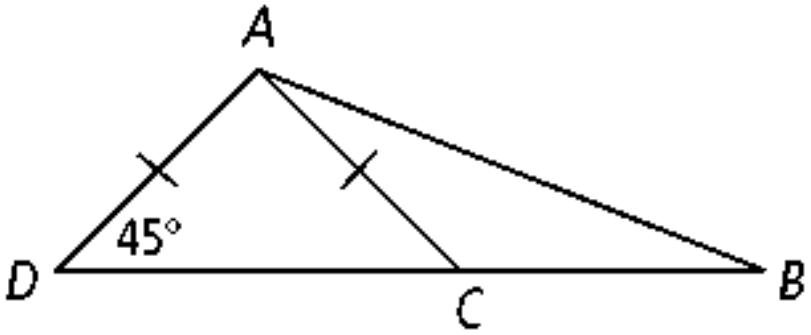
CLASS WORK

1.

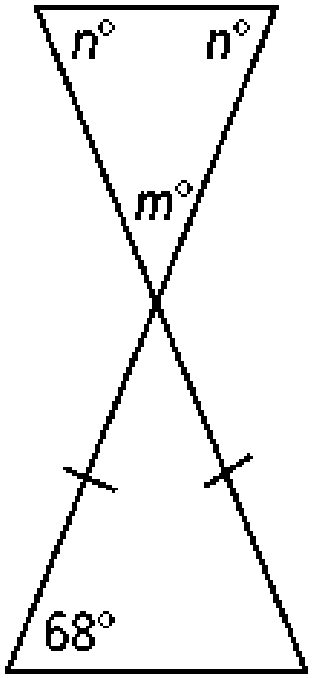


For 1 and 3, Find the values of all variables.

2. Find $m\angle ACB$.

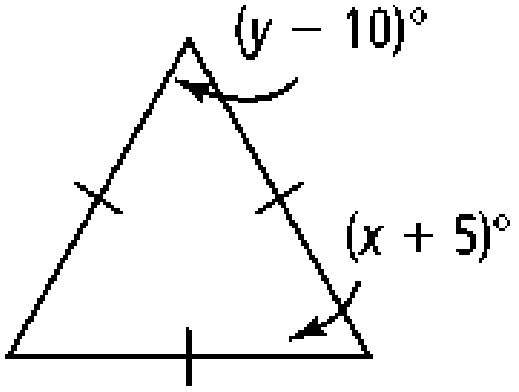


3.



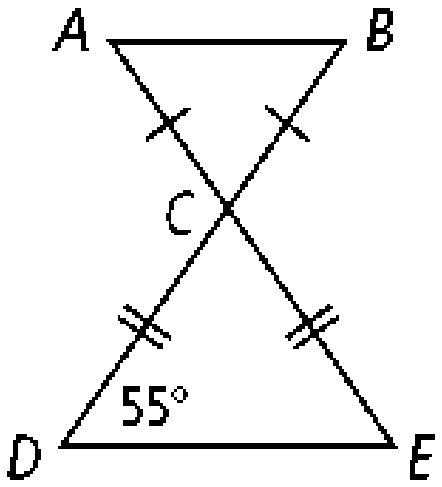
EXIT PROBLEMS

4.

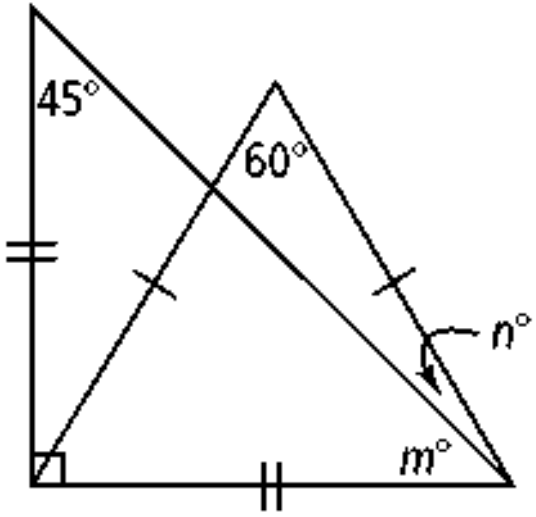


For 4 and 6, find the values of all variables.

5. Find $m\angle ABC$.

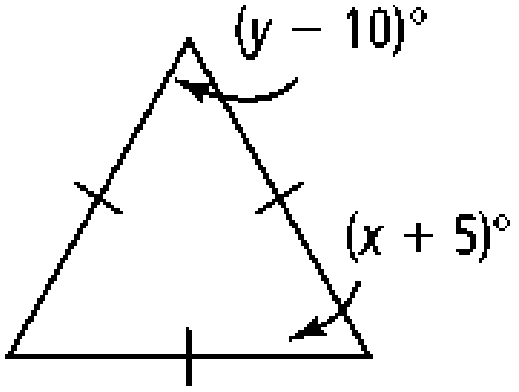


6.



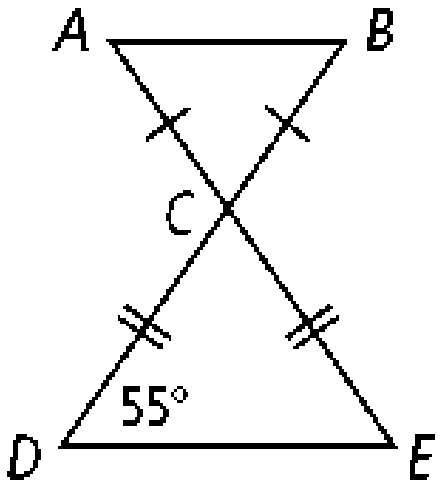
EXIT PROBLEMS

4.

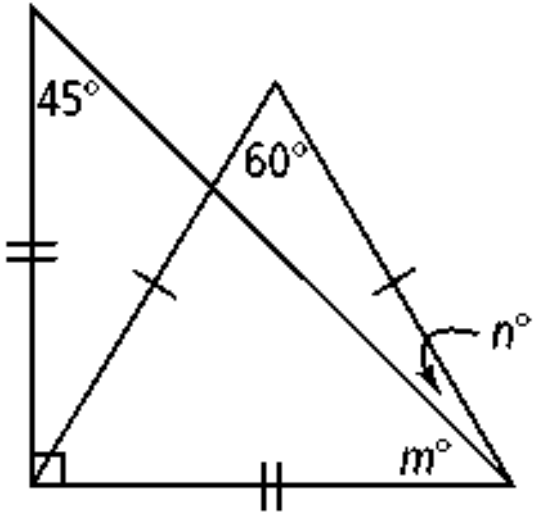


For 4 and 6, find the values of all variables.

5. Find $m\angle ABC$.



6.



LEARNING RUBRIC

- Got It: Applies concepts to prove congruence and find angle measures in complex/real world situations
- Almost There: Represents and applies concepts to solve for angle measures
- Moving Forward: Solves for interior and exterior angle measures in more complex situations that are represented
- Getting Started: Solves for interior and exterior angles in simple, represented settings

- If two sides of a triangle are congruent, then the angles opposite those sides are congruent.
- If two angles of a triangle are congruent, then the sides opposite those angles are congruent.
- Equilateral triangles are also equiangular.

SUMMARY

HOMEWORK

Pages 289 – 291:

12 – 28 even;

34 – 44 even