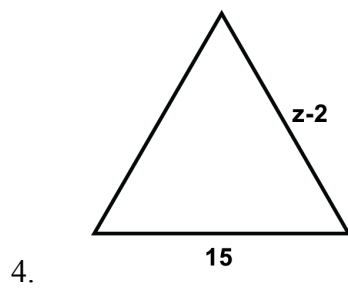
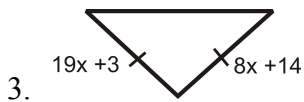
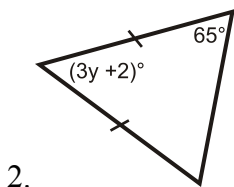
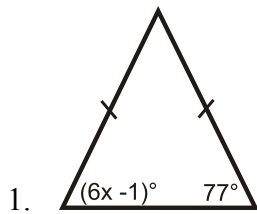
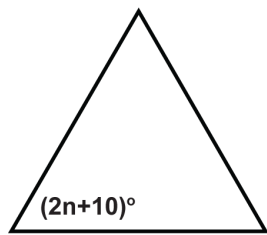


# Isosceles and Equilateral Triangle Practice

Find the unknown.





5.

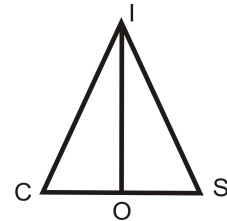
Determine if the following statements are true or false.

6. Base angles of an isosceles triangle are congruent.
7. Base angles of an isosceles triangle are complementary.
8. Base angles of an isosceles triangle can be equal to the vertex angle.
9. Base angles of an isosceles triangle are acute.

Complete the proofs below.

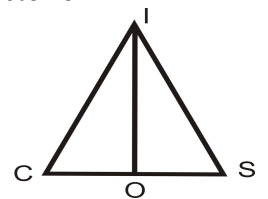
10. Given: Isosceles  $\triangle CIS$ , with base angles  $\angle C$  and  $\angle S$  and  $\overline{IO}$  is the angle bisector of  $\angle CIS$

Prove: Triangle CIO is congruent to triangle SIO



11. Given: Isosceles  $\triangle ICS$  with  $\angle C$  and  $\angle S$  and  $\overline{IO}$  is the perpendicular bisector of  $\overline{CS}$   
 Prove:  $\overline{IO}$  is the angle bisector of  $\angle CIS$

Hint: Prove the triangles congruent, then use CPCTC



12. Draw the figure, then complete the proof.

Given: Equilateral triangle ABC with BD as the segment bisector of AC.

Prove: Angle ABD is congruent to angle CBD