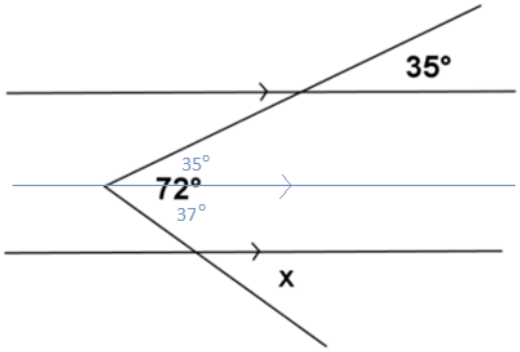
Name_____ Date_____

Geometry Lesson 8 Module 1

Warm Up

Find the measure of angle x in the figure to the right. Explain your calculations. (Hint: Draw an auxiliary line segment.)

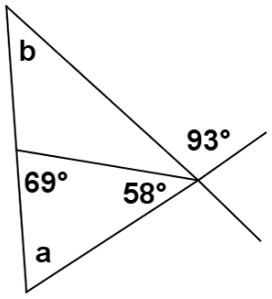


Name_____ Date_____

Geometry Lesson 8 Module 1

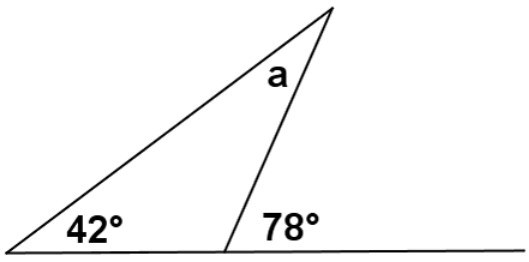
Classwork

1. **Find the measures of angles a and b in the figure to the right. Justify your results.**

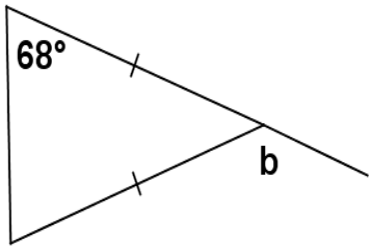


In each figure, determine the measures of the unknown (labeled) angles. Give reasons for your calculations.

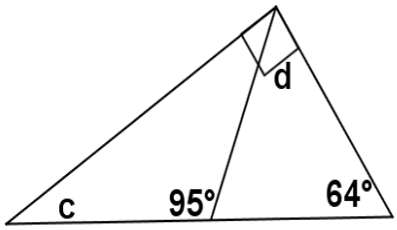
2.



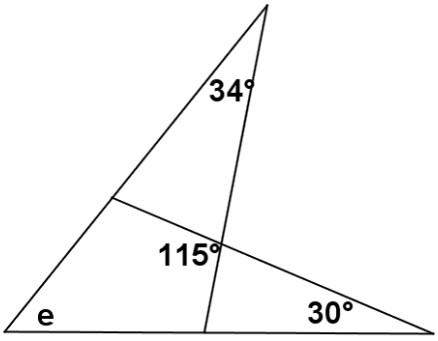
3.



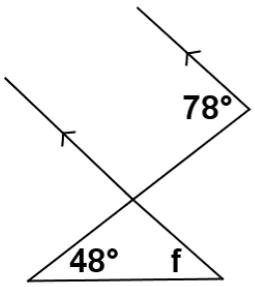
4.



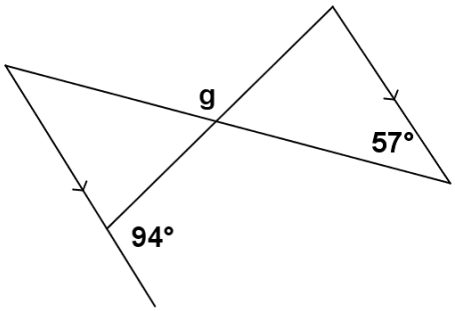
5.



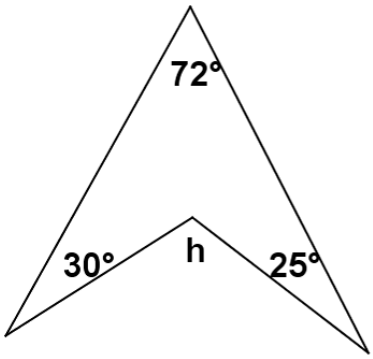
6.



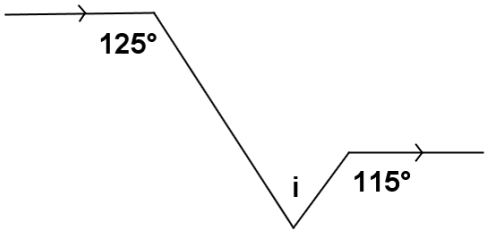
7.



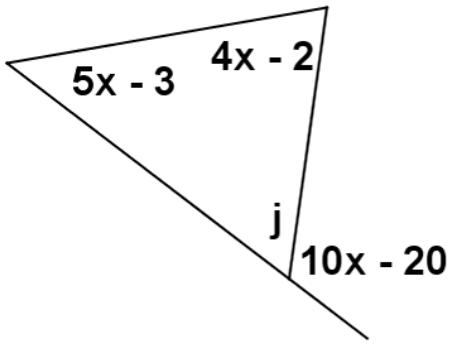
8.



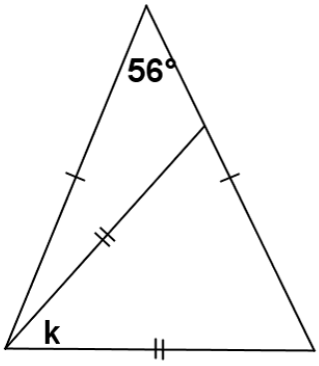
9.



10.



11.



Name_____ Date_____

Geometry Lesson 8 Module 1

Vocabulary

Facts about angles in a triangle

1. **The sum of the 3 angle measures of any triangle is _____**

2. **_____: A point lies in the *interior of a triangle* if it lies in the interior of each of the angles of the triangle.**

3. **In any triangle, the measure of the exterior angle is equal to the sum of the measures of the _____ _____ angles. These are sometimes also known as _____ angles.**

4. **Base angles of an _____ triangle are equal in measure.**

5. **Each angle of an _____ triangle has a measure equal to 60°.**

Relevant Vocabulary

1. **_____: An *isosceles triangle* is a triangle with at least two sides of equal length.**

2. **_____: Every triangle $\triangle ABC$ determines three angles, namely, $\angle BAC$, $\angle ABC$, and $\angle ACB$. These are called the *angles of* $\triangle ABC$.**

3. **_____: Let $\angle ABC$ be an interior angle of a triangle $\triangle ABC$, and let D be a point on $\overleftrightarrow{AB}$ such that B is between A and D. Then $\angle CBD$ is an *exterior angle of the triangle* $\triangle ABC$.**