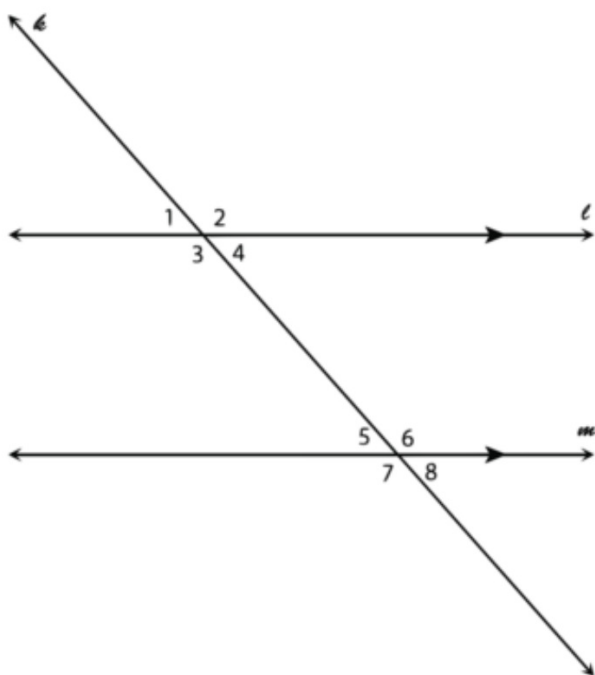




Do Now
Take out your homework
Calculators



Name a pair of interior angles:

Name a pair of alt. interior angles:

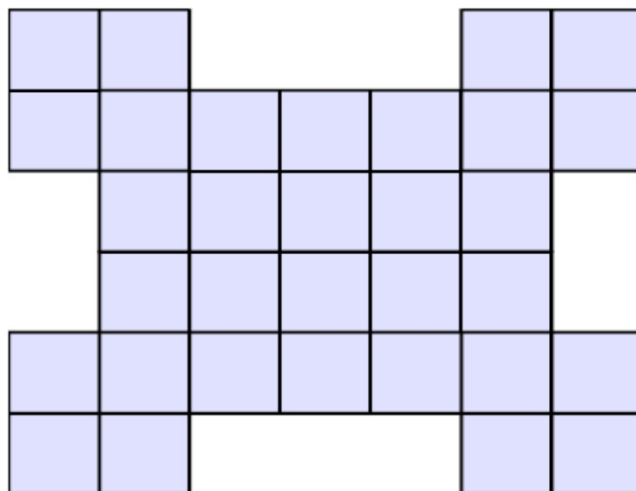
Name a pair of alt. exterior angles:

Name a pair of corresponding angles:

Check In!

How Many Squares? ☆☆ 19

How many **squares** can you see in this pattern?





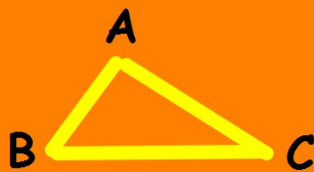
Triangles are the simplest polygons used in the design of furniture, buildings, and bridges.



Theorem 2-1 The sum of the
measures of the angles
of a triangle is 180

Triangle
Angle-Sum
Theorem

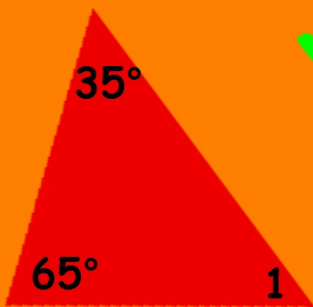
$$m\angle A + m\angle B + m\angle C = 180$$

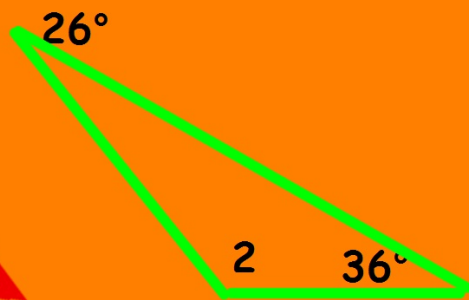


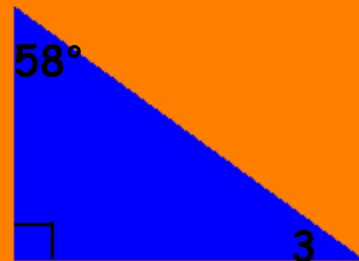
Find the measure of each numbered angle.



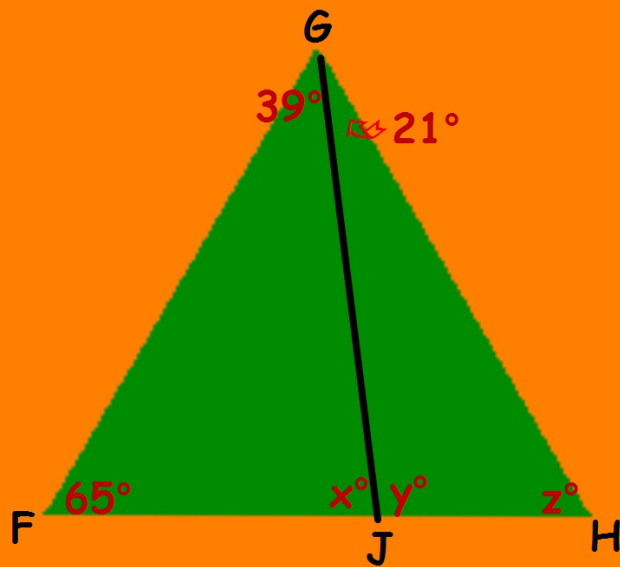
© Oxford designers & illustrators 2004



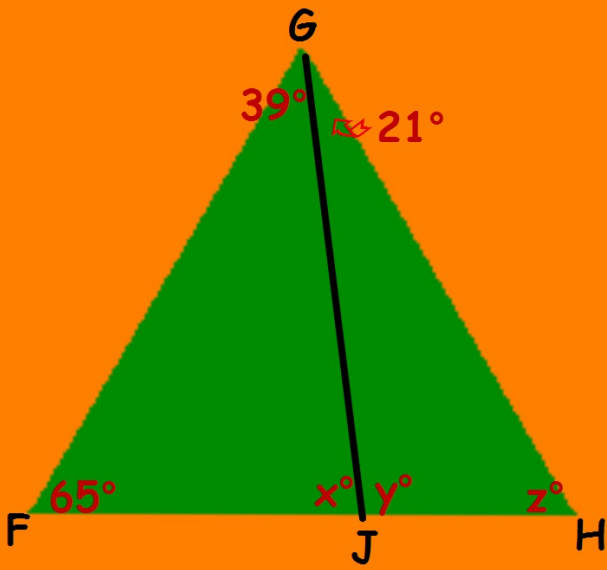




Find the value of x , y , and z .



Use the
Triangle-Sum
Theorem

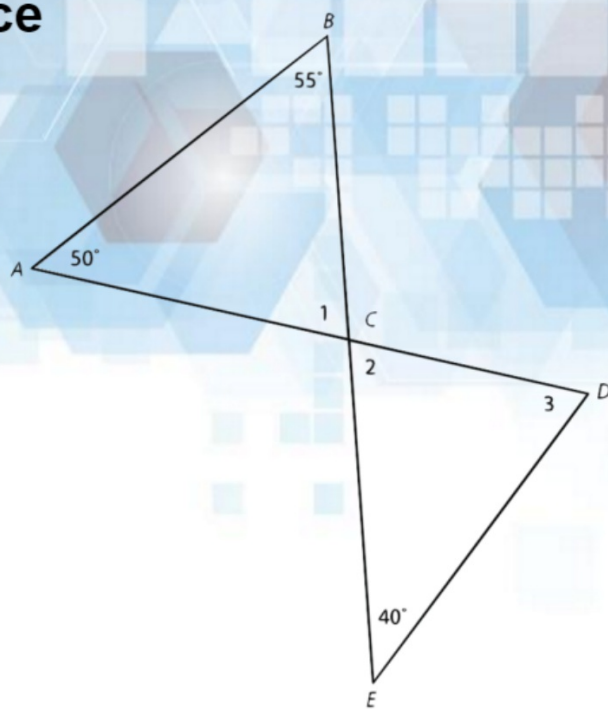


Find x , y , and z .

Guided Practice

Example 2

Find the missing angle measures.

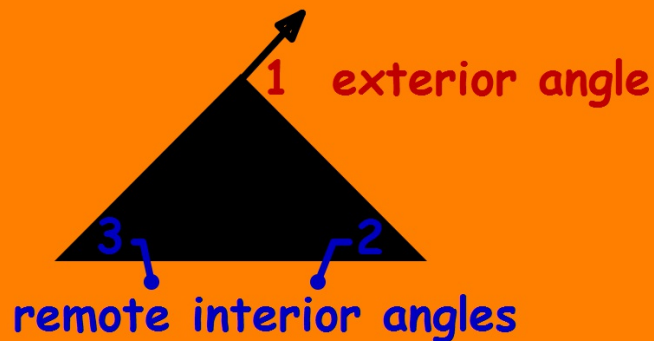


Exterior Angles of a Triangle

an angle formed by a side and an extension of a side

Remote Interior Angles

the two non-adjacent interior angles for each exterior angle

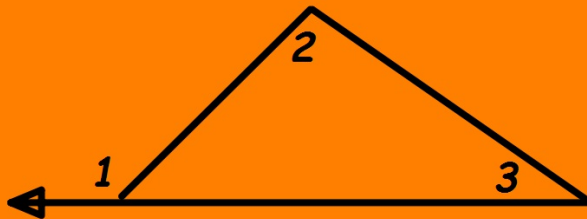


Theorem 2-2

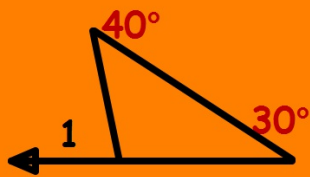
Exterior Angle Theorem

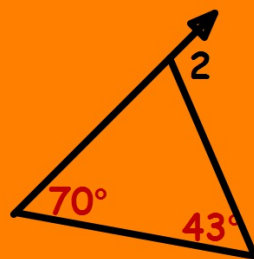
The measure of each angle exterior angle of a triangle equals the sum of the measures of its two remote interior angles.

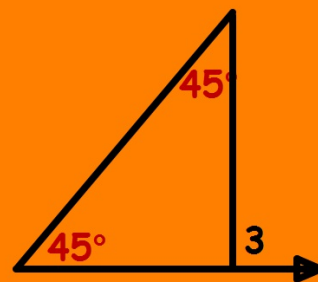
$$m \angle 1 = m \angle 2 + m \angle 3$$



Find the measure of each numbered exterior angle.



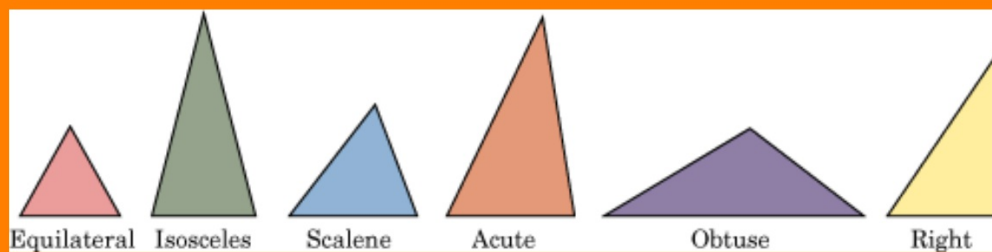






Triangle Classification

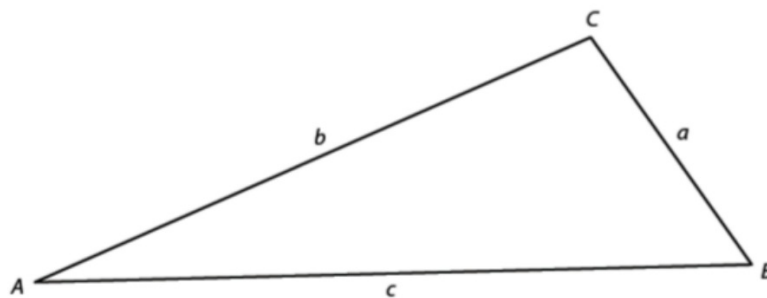
Equilateral	All sides have the same length.
Isosceles	Two sides have the same length.
Scalene	All sides have different lengths.
Acute	All angles are less than 90 degrees.
Obtuse	One angle is greater than 90 degrees.
Right	One angle is 90 degrees.



Key Concepts, *continued*

Theorem

If one angle of a triangle has a greater measure than another angle, then the side opposite the greater angle is longer than the side opposite the lesser angle.



$$m\angle A < m\angle B < m\angle C$$
$$a < b < c$$

Independent Practice!

- **Go to Google Classroom.**
- **"In Class Activity 04/18/2017"**
- **You have till end of the class.**
- **Solutions are in the back! - You MUST show work.**

