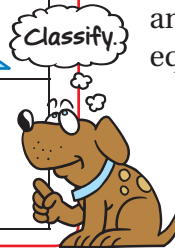


Key Concept and Vocabulary

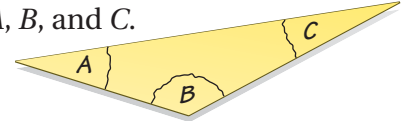
Triangle	Diagram
A <i>right triangle</i> has 1 right angle.	
An <i>acute triangle</i> has 3 acute angles.	
An <i>obtuse triangle</i> has 1 obtuse angle.	
A <i>scalene triangle</i> has no congruent sides.	
An <i>isosceles triangle</i> has at least 2 congruent sides.	
An <i>equilateral triangle</i> has 3 congruent sides. An equilateral triangle is also <i>equiangular</i> (3 congruent angles.)	



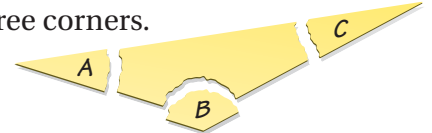
Visual Model

The sum of the angle measures of a triangle is 180° .

- Draw a triangle. Label the angles A, B, and C.



- Cut out the triangle. Tear off the three corners.

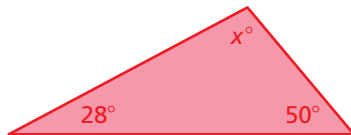


- When put together, the angles A, B, and C form a straight line, which is equivalent to 180° .



Skill Example

1.



$$x + 28 + 50 = 180$$

$$x = 102$$

- The value of x is 102. The triangle is an obtuse, scalene triangle.

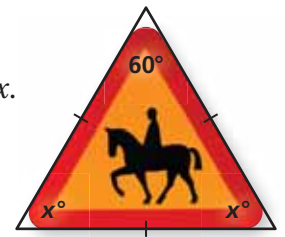
Application Example

2. The sum of the angle measures of the sign is 180° . Find the value of x .

$$x + x + 60 = 180$$

$$2x = 120$$

$$x = 60$$



- The value of x is 60.

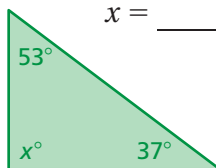
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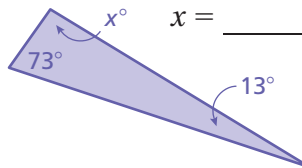
Check your answers at BigIdeasMath.com.

Find the value of x . Then classify the triangle in as many ways as possible.

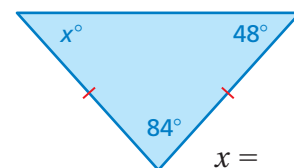
3. $x =$ _____



4. $x =$ _____



5. $x =$ _____



6. **GABLE** The gable of a house is shown. Find the value of x .
- $x =$ _____

