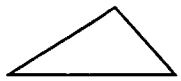
Name _____ Date _____ Class _____

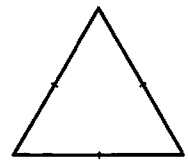
SKILL 7: Classifying Triangles

Line segments are **congruent** if they have the same length. One way to classify triangles is by the number of congruent sides they have.



scalene triangle
no congruent sides

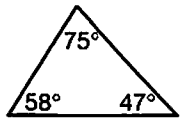
isosceles triangle
two or more congruent sides



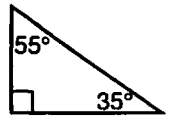
equilateral triangle
three congruent sides

Notice that since an equilateral triangle has two or more congruent sides, it is also an isosceles triangle.

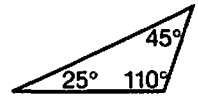
Another way to classify triangles is by their angles.



acute triangle
three acute angles



right triangle
one right angle

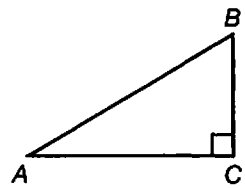


obtuse triangle
one obtuse angle

Example

Classify the triangle by its sides and its angles.

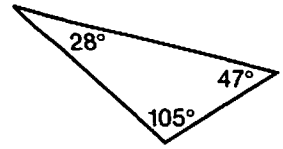
No two sides of the triangle are congruent, so triangle *ABC* is scalene. The triangle has a right angle. Triangle *ABC* is also a right triangle.



Guided Practice

Classify the triangle by its sides and angles.

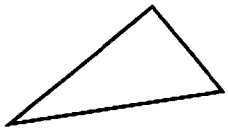
1. Are any of its sides congruent? _____
2. What name is given to a triangle with that number of congruent sides? _____
3. Is there a right or an obtuse angle, or are all angles acute? _____
4. The triangle is _____ and _____.



Name _____ Date _____ Class _____

SKILL 7: Practice

Classify each triangle by its sides.

1. 

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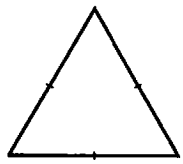
2. 

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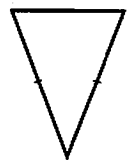
3. 

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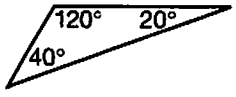
Classify each triangle by its angles.

4. 

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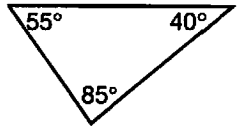
5. 

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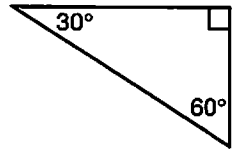
6. 

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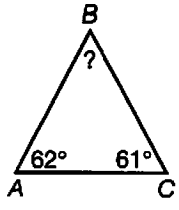
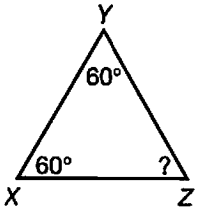
Recall that the sum of the angle measures of any triangle is 180°. Use this fact to find the missing angle measure. Then classify the triangle by its angles.

7. 

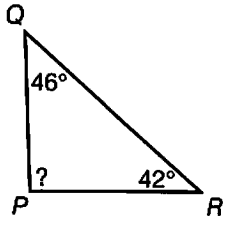
$m\angle B =$ _____

_____

8. 

$m\angle Z =$ _____

_____

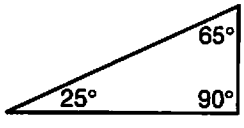
9. 

$m\angle P =$ _____

_____

10. Which is a correct description of the triangle?

Skill 7



A obtuse **C** scalene
B equilateral **D** isosceles

11. What kind of polygon has exactly 4 sides?

Skill 4

F triangle **H** octagon
G quadrilateral **J** hexagon