

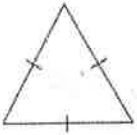
Lesson 7-4 Notes Classifying Triangles

	Vocabulary Term	Definition	Example
ANGLES	Acute Triangle	A triangle with <u>3 acute</u> angles.	
	Right Triangle	A triangle with one right angle.	
	Obtuse Triangle	A triangle with <u>one obtuse</u> angle.	
SIDES	Equilateral Triangle <i>equal sides</i>	A triangle with 3 congruent sides.	
	Isosceles Triangle	A triangle with at least two congruent sides.	
	Scalene Triangle	A triangle with no congruent sides.	

Hint: Congruent means exactly the same size and shape.

What type of triangle is it?

Classify each triangle by its **SIDES**.



equilateral

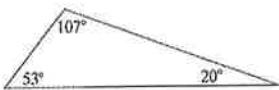


scalene



isosceles

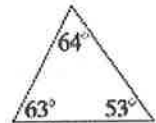
Classify each triangle by its **ANGLES**.



obtuse



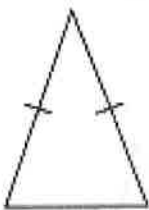
right



acute

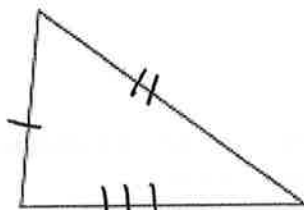
Classify each triangle by its sides.

1.



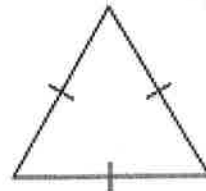
isosceles

2.



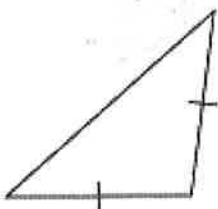
scalene

3.



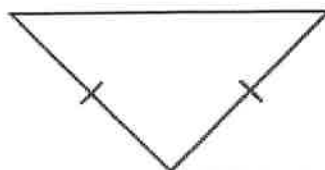
equilateral

4.



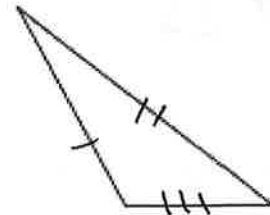
isosceles

5.



isosceles

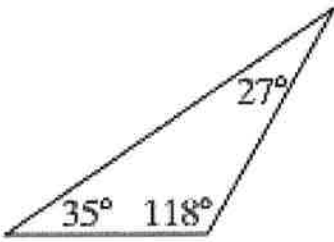
6.



scalene

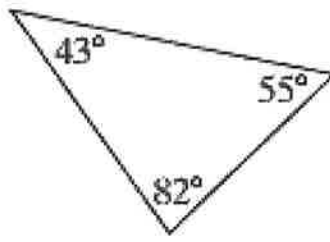
Classify each triangle by its angle measures.

7.



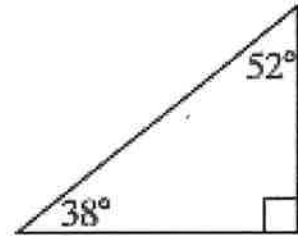
obtuse

8.



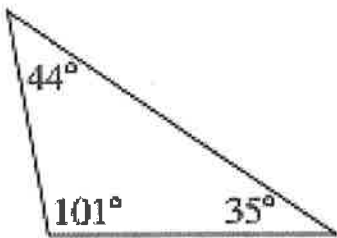
acute

9.



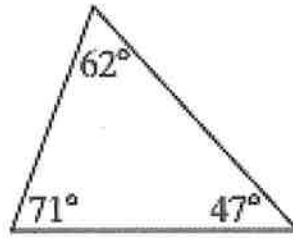
right

10.



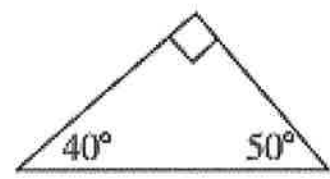
obtuse

11.



acute

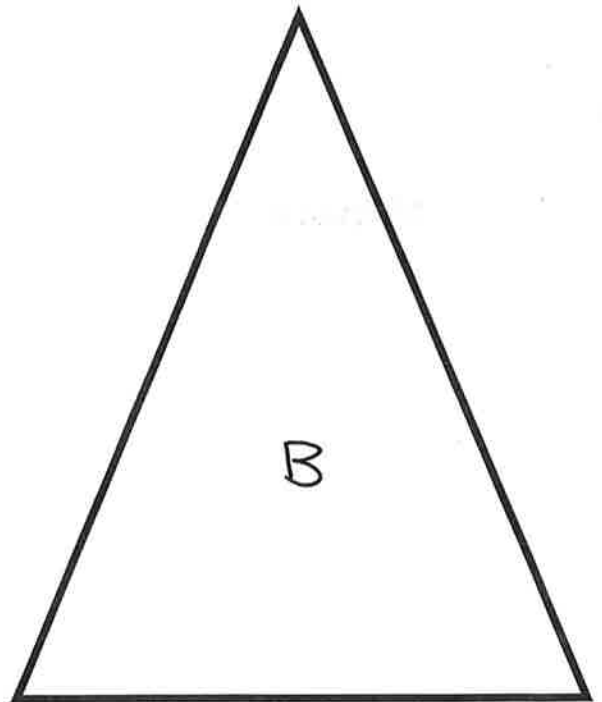
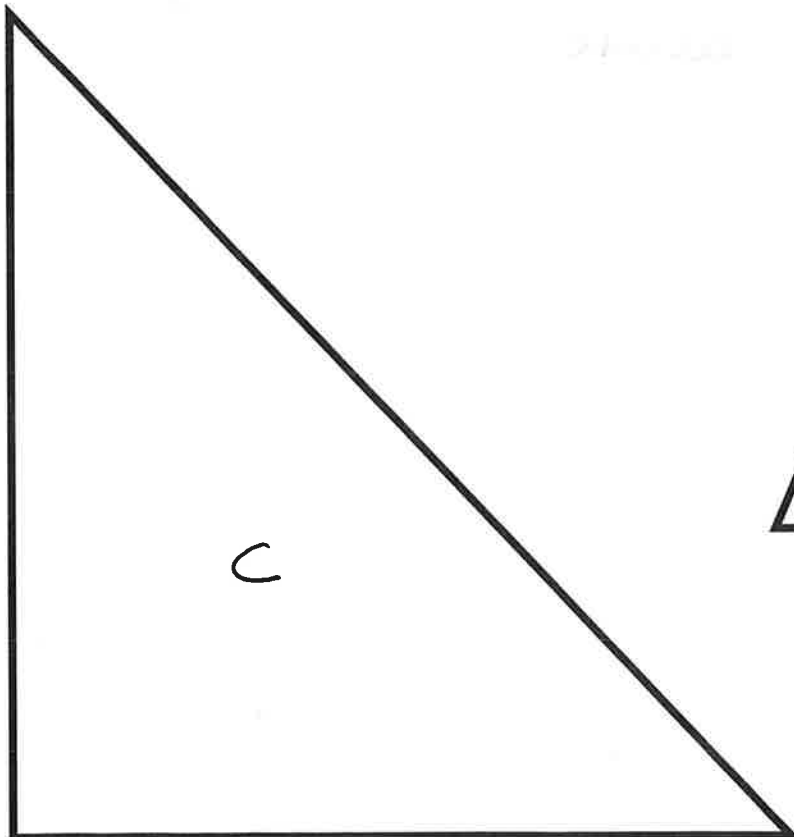
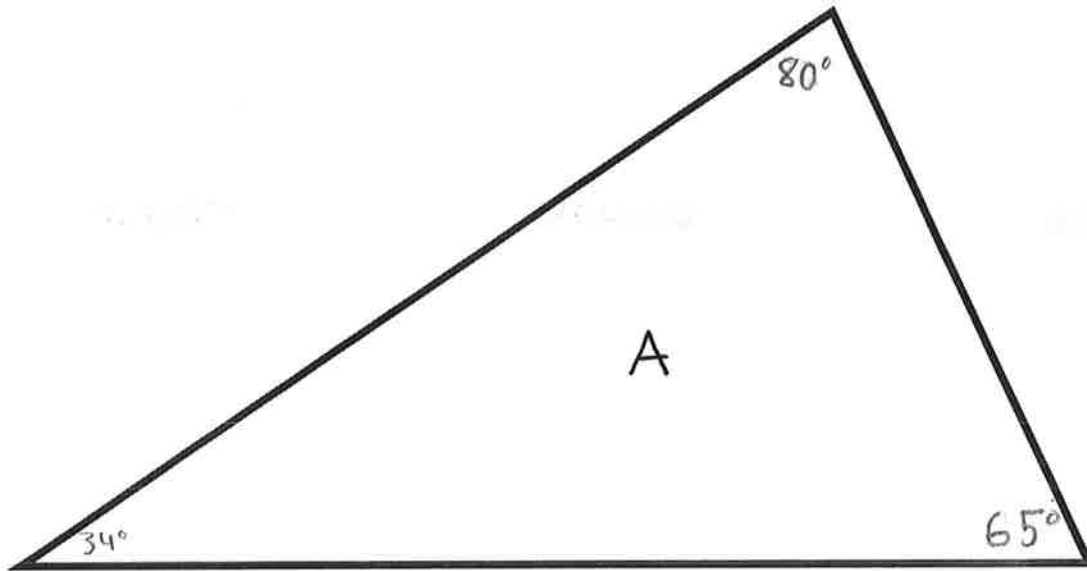
12.



right

Lesson 7-4 Notes Continued
Angle Measures of Triangles

$$\begin{array}{r} 1 \\ 82 \\ 65 \\ \underline{35} \\ 182 \end{array}$$



If we add together the three angles of a triangle, they will always equal 180°.

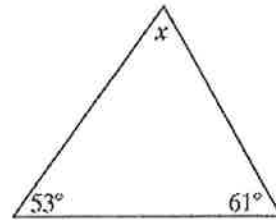
Another way of saying this is:

The sum of the interior angles of a triangle is 180°.

EXAMPLE Finding an Angle Measure **Algebra**

Find the value of x in the triangle at the right.

$$\begin{aligned} x + 53^\circ + 61^\circ &= 180^\circ \\ x + 114^\circ &= 180^\circ \\ x + 114^\circ - 114^\circ &= 180^\circ - 114^\circ \\ x &= 66^\circ \end{aligned}$$



Algebra Find the value of x in each triangle.

13. $x = 80^\circ$

$$\begin{array}{r} 1 \\ + 55 \\ + 45 \\ \hline 100 \end{array} \quad \begin{array}{r} - 180 \\ - 100 \\ \hline 80 \end{array}$$

14. $x = 64^\circ$

$$\begin{array}{r} + 42 \\ + 74 \\ \hline 116 \end{array} \quad \begin{array}{r} 180 \\ - 116 \\ \hline 64 \end{array}$$

15. $x = 40^\circ$

$$\begin{array}{r} + 102 \\ + 38 \\ \hline 140 \end{array} \quad \begin{array}{r} 180 \\ - 140 \\ \hline 40 \end{array}$$

16. $x = 38^\circ$

$$\begin{array}{r} 113 \\ + 29 \\ \hline 142 \end{array} \quad \begin{array}{r} - 180 \\ - 142 \\ \hline 38 \end{array}$$

17. $x = 93^\circ$

$$\begin{array}{r} + 41 \\ + 46 \\ \hline 87 \end{array} \quad \begin{array}{r} 180 \\ - 87 \\ \hline 93 \end{array}$$

18. $x = 60^\circ$

$$\begin{array}{r} 65 \\ + 55 \\ \hline 120 \end{array} \quad \begin{array}{r} 180 \\ - 120 \\ \hline 60 \end{array}$$

