

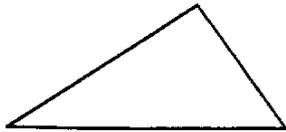
5-2

Name _____ Date _____

Study Guide

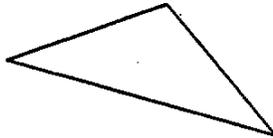
Classifying Triangles

Triangles may be classified by the lengths of their sides or by the measures of their angles.



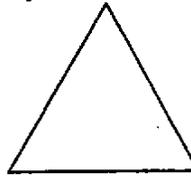
scalene

All sides are different lengths.



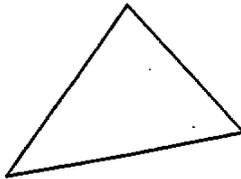
isosceles

Two sides are the same length.



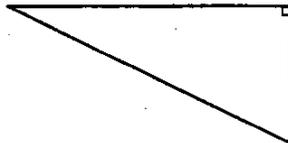
equilateral

All three sides are the same length.



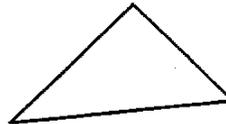
acute

All three angles are acute.



right

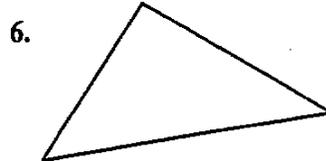
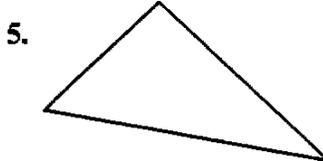
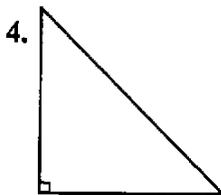
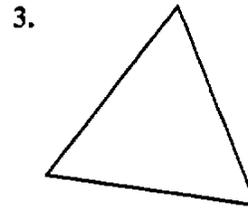
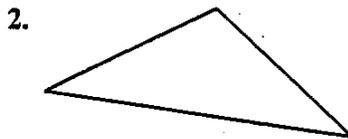
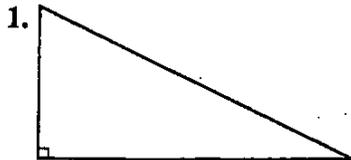
One angle is a right angle. The symbol \square shows a right angle.



obtuse

One angle is an obtuse angle.

Classify each triangle by its angles and by its sides.



Tell whether each statement is true or false. Then draw a figure to justify your answer.

7. A right triangle can never be isosceles.

8. A triangle can be right and equilateral.

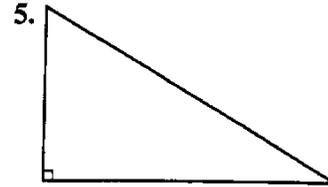
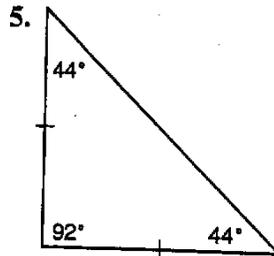
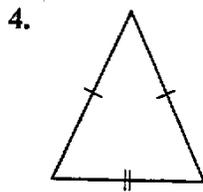
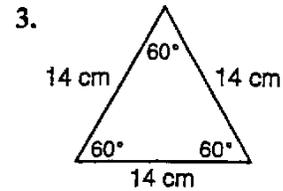
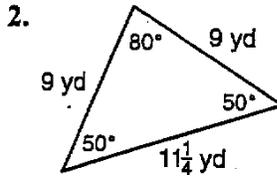
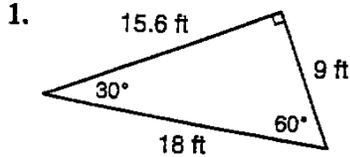
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Name _____ Date _____

Practice

Classifying Triangles

Classify each triangle by its angles and by its sides.



Tell whether each statement is true or false. Then draw a figure to justify your answer.

7. A triangle can be isosceles and right.
8. A triangle can be obtuse and equilateral.
9. A triangle can be scalene and acute.
10. A right triangle can be an obtuse triangle.
11. An equilateral triangle is acute.
12. A triangle can contain two right angles.
13. Find the value of x in $\triangle ABC$ if $m\angle A = 94^\circ$, $m\angle B = 47^\circ$, and $m\angle C = x^\circ$.
14. Find the value of x in $\triangle WYZ$ if $m\angle W = 37^\circ$, $m\angle Y = 68^\circ$, and $m\angle Z = 5x^\circ$.