

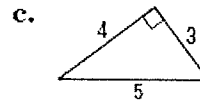
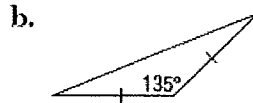
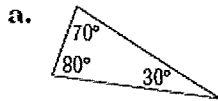
1. Supply the correct numbers to complete each sentence.

- a. In an obtuse triangle, there are _____ acute angle(s), _____ right angle(s), and _____ obtuse angle(s).
- b. In an acute triangle, there are _____ acute angle(s), _____ right angle(s), and _____ obtuse angle(s).
- c. In a right triangle, there are _____ acute angle(s), _____ right angle(s), and _____ obtuse angle(s).

2. Determine whether each statement is *always*, *sometimes*, or *never* true.

- a. A right triangle is scalene.
- b. An obtuse triangle is isosceles.
- c. An equilateral triangle is a right triangle.
- d. An equilateral triangle is isosceles.
- e. An acute triangle is isosceles.
- f. A scalene triangle is obtuse.

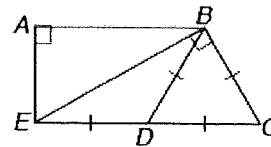
3. Describe each triangle by as many of the following words as apply: *acute*, *obtuse*, *right*, *scalene*, *isosceles*, or *equilateral*.



Identify the indicated type of triangles.

4. right

5. isosceles



6. scalene

7. obtuse

8. Find the measure of each side of equilateral $\triangle RST$ with $RS = 2x + 2$, $ST = 3x$, and $TR = 5x - 4$.

9. Find the measure of each side of isosceles $\triangle ABC$ with $AB = BC$ if $AB = 4y$, $BC = 3y + 2$, and $AC = 3y$.

Find the measures of the sides of $\triangle RST$ and classify each triangle by its sides.

10. $R(0, 2), S(2, 5), T(4, 2)$

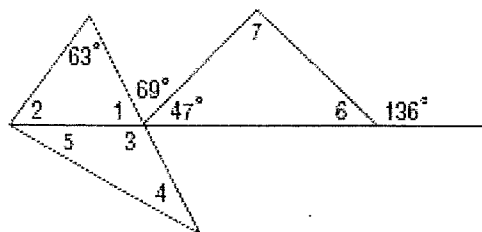
RS = _____ ST = _____ RT = _____ Classification: _____

11. $R(1, 3), S(4, 7), T(5, 4)$

RS = _____ ST = _____ RT = _____ Classification: _____

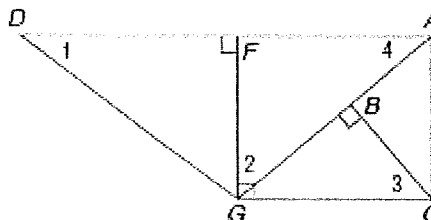
Find each measure if $m\angle 4 = m\angle 5$.

- | | |
|-----------------|-----------------|
| 12. $m\angle 1$ | 15. $m\angle 2$ |
| 13. $m\angle 3$ | 16. $m\angle 4$ |
| 14. $m\angle 5$ | 17. $m\angle 6$ |



Find each measure if $m\angle DGF = 53$ and $m\angle AGC = 40$.

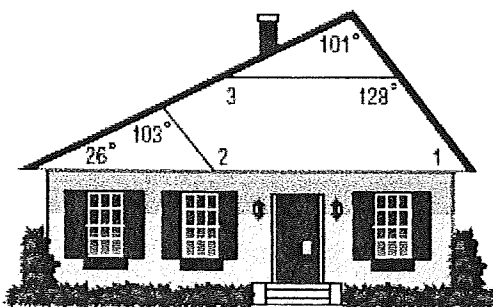
18. $m\angle 1$
 19. $m\angle 2$
 20. $m\angle 3$
 21. $m\angle 4$



HOUSING For Exercises 27–29, use the following information.

The two braces for the roof of a house form triangles. Find each measure.

22. $m\angle 1$
 23. $m\angle 2$
 24. $m\angle 3$



25. Given: $\angle FCI \cong \angle ICH$
 $\overline{CI} \perp \overline{FH}$
 Prove: $\angle F \cong \angle H$

