Complete the sentence with always, sometimes, or never.

1. An isosceles triangle is ___ a right triangle.
2. An obtuse triangle is ___ a right triangle.
3. A right triangle is ___ an equilateral triangle.
4. A right triangle is ___ an isosceles triangle.

Classify the triangle by its sides and by its angles.

5. __________

6. __________

7. __________

A triangle has the given vertices. Graph the triangle and classify it by its sides. Then determine if it is a right triangle.

8. $A(3, 1), B(3, 4), C(7, 1)$
9. $A(1, 1), B(4, 0), C(8, 5)$
10. $A(2, 2), B(6, 2), C(4, 8)$

Find the value of $x$. Then classify the triangle by its angles.

11. __________
12. __________
13. __________
Find the measure of the exterior angle shown.

14. \(80^\circ\)  
\(\angle x\)  
\((3x - 22)^\circ\)

15. \((4x + 8)^\circ\)  
\((2x + 3)^\circ\)  
\(51^\circ\)

16. \(2x^\circ\)  
\((103 - x)^\circ\)  
\((6x - 7)^\circ\)

Find the measure of the numbered angle.

17. \(\angle 1\)
18. \(\angle 2\)
19. \(\angle 3\)
20. \(\angle 4\)

21. In \(\triangle ABC\), \(m\angle A = m\angle B + 30^\circ\) and \(m\angle C = m\angle B + 60^\circ\). Find the measure of each angle.

22. In \(\triangle ABC\), \(m\angle A = 2(m\angle B)\) and \(m\angle C = 3(m\angle B)\). Find the measure of each angle.

Find the values of \(x\) and \(y\).

23.

24.

25.

26. **Metal Brace** The diagram shows the dimensions of a metal brace used for strengthening a vertical and horizontal wooden junction. Classify the triangle formed by its sides. Then copy the triangle, measure the angles, and classify the triangle by its angles.