Find the sum of the measures of the interior angles of the indicated polygon.

1. Hexagon   2. Dodecagon   3. 11-gon

4. 15-gon   5. 20-gon   6. 40-gon

The sum of the measures of the interior angles of a convex polygon is given. Classify the polygon by the number of sides.

7. 180°   8. 540°   9. 900°
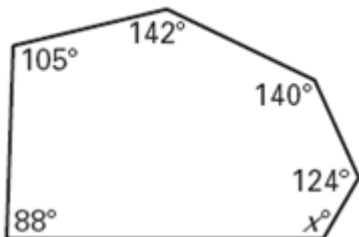
10. 1800°   11. 2520°   12. 3960°
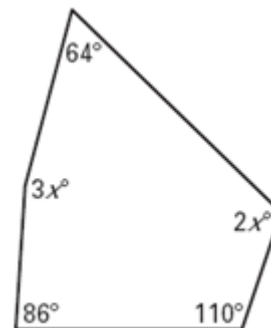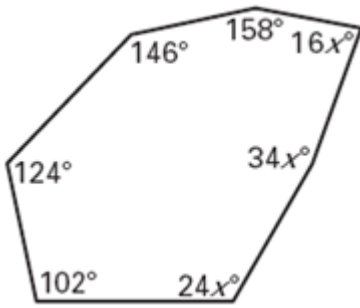
13. 5040°   14. 5940°   15. 8640°

Find the value of x in the given polygons below.

16.

17.

18.

146° 158° 16x°
124°
34x°
102° 24x°

19.

93° 75°
x°
2x°

20.

60°
90°
4x°
2x°
x°

21.

60°
8x°
100°
20°
6x°
6x°
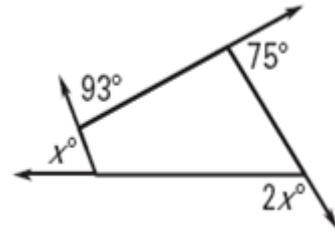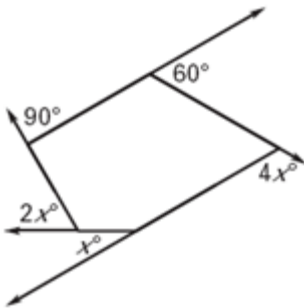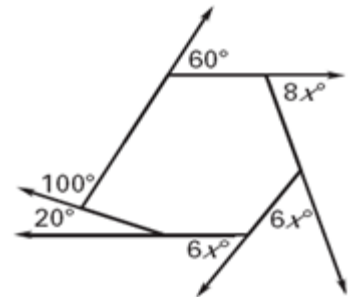
22. What is the measure of each exterior angle of a regular nonagon?

Find the measures of an interior angle and an exterior angle of the indicated polygon.

23. Regular octagon   24. Regular 45-gon   25. Regular 60-gon

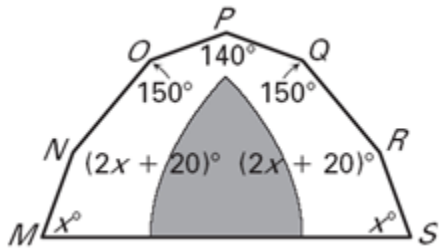**Find the value of n for each regular n-gon described.**

26. Each interior angle of the regular n-gon has a measure of 140°.

27. Each interior angle of the regular n-gon has a measure of 175.2°.

28. Each exterior angle of the regular n-gon has a measure of 45°.

29. Each exterior angle of the regular n-gon has a measure of 3°.

30. The front view of a camping tent is shown below. Find the value of x. Then determine the measure of each angle.