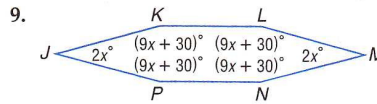
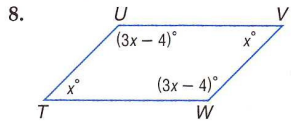


ASSIGNMENT #3.5B – SHOW ALL WORK ON A SEPARATE SHEET OF PAPER

ALGEBRA Find the measure of each interior angle.



Find the measures of an exterior angle and an interior angle given the number of sides of each regular polygon.

10. 6

11. 18

12. **AQUARIUMS** The regular polygon at the right is the base of a fish tank. Find the sum of the measures of the interior angles of the pentagon.



Find the sum of the measures of the interior angles of each convex polygon.

13. 32-gon

14. 18-gon

15. 19-gon

16. 27-gon

17. 4y-gon

18. 2x-gon

19. **GARDENING** Carlotta is designing a garden for her backyard. She wants a flower bed shaped like a regular octagon. Find the sum of the measures of the interior angles of the octagon.

20. **GAZEBOS** A company is building regular hexagonal gazebos. Find the sum of the measures of the interior angles of the hexagon.

The measure of an interior angle of a regular polygon is given. Find the number of sides in each polygon.

21. 140

22. 170

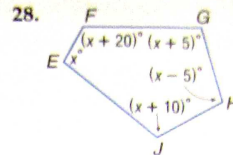
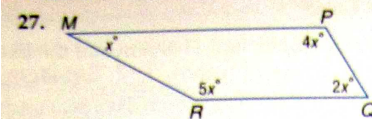
23. 160

24. 165

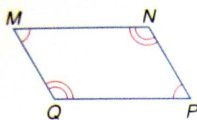
25. $157\frac{1}{2}$

26. $176\frac{2}{5}$

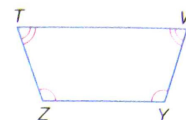
ALGEBRA Find the measure of each interior angle using the given information.



29. parallelogram MNPQ with $m\angle M = 10x$ and $m\angle N = 20x$



30. isosceles trapezoid TWYZ with $\angle Z \cong \angle Y$, $m\angle Z = 30x$, $\angle T \cong \angle W$, and $m\angle T = 20x$



31. decagon in which the measures of the interior angles are $x + 5$, $x + 10$, $x + 20$, $x + 30$, $x + 35$, $x + 40$, $x + 60$, $x + 70$, $x + 80$, and $x + 90$

32. polygon ABCDE with $m\angle A = 6x$, $m\angle B = 4x + 13$, $m\angle C = x + 9$, $m\angle D = 2x - 8$, and $m\angle E = 4x - 1$

33. quadrilateral in which the measures of the angles are consecutive multiples of x

34. quadrilateral in which the measure of each consecutive angle increases by 10

Find the measures of each exterior angle and each interior angle for each regular polygon.

35. decagon

36. hexagon

37. nonagon

38. octagon

Find the measures of an interior angle and an exterior angle given the number of sides of each regular polygon. Round to the nearest tenth if necessary.

39. 11

40. 7

41. 12