

Name _____

Date _____

LESSON 8.1 Practice A
For use with pages 506–513

If you turn this in on time: do the odds.
If you turn this in late or
you are doing it over: do the evens.

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

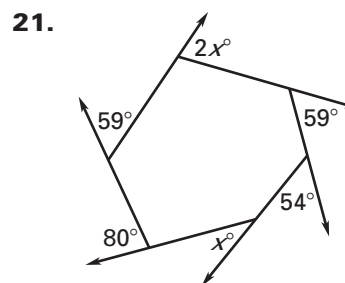
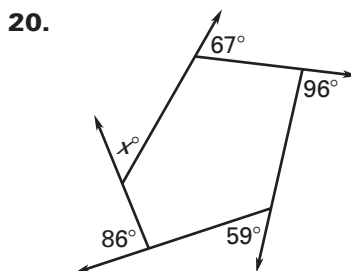
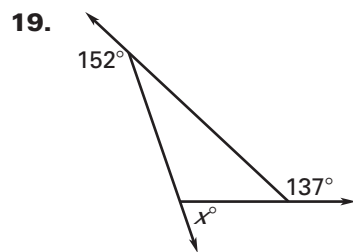
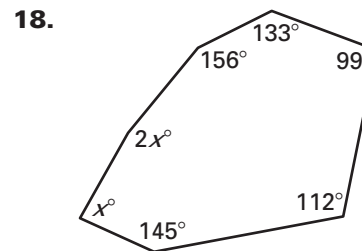
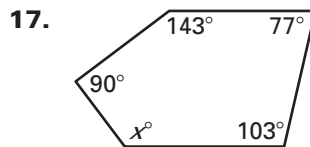
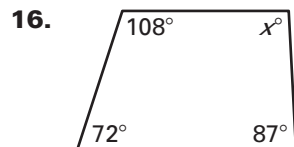
- | | | |
|------------|-----------|-----------|
| 1. Decagon | 2. 13-gon | 3. 17-gon |
| 4. 18-gon | 5. 22-gon | 6. 25-gon |
| 7. 30-gon | 8. 34-gon | 9. 39-gon |

Teacher
Score:

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

- | | | |
|------------------|------------------|------------------|
| 10. 1260° | 11. 2160° | 12. 3240° |
| 13. 4680° | 14. 5400° | 15. 7560° |

Find the value of x .



22. The measures of the interior angles of a convex quadrilateral are x° , $2x^\circ$, $4x^\circ$, and $5x^\circ$. What is the measure of the largest interior angle?
23. The measures of the exterior angles of a convex pentagon are $2x^\circ$, $4x^\circ$, $6x^\circ$, $8x^\circ$, and $10x^\circ$. What is the measure of the smallest exterior angle?

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

- | | | |
|---------------------|---------------------|--------------------|
| 24. Regular hexagon | 25. Regular decagon | 26. Regular 15-gon |
| 27. Regular 20-gon | 28. Regular 30-gon | 29. Regular 36-gon |

Student
score:
How well
do you feel
you understand
this learning
target:

A
B
C
D
F

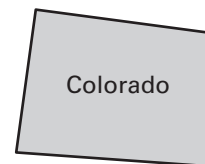
LESSON
8.1**Practice A** *continued*
For use with pages 506–513

In Exercises 30–37, find the value of n for each regular n -gon described.

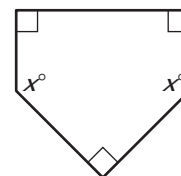
30. Each interior angle of the regular n -gon has a measure of 90° .
31. Each interior angle of the regular n -gon has a measure of 108° .
32. Each interior angle of the regular n -gon has a measure of 135° .
33. Each interior angle of the regular n -gon has a measure of 144° .
34. Each exterior angle of the regular n -gon has a measure of 90° .
35. Each exterior angle of the regular n -gon has a measure of 60° .
36. Each exterior angle of the regular n -gon has a measure of 40° .
37. Each exterior angle of the regular n -gon has a measure of 30° .

38. **Geography** The shape of Colorado can be approximated by a polygon, as shown.

- a. How many sides does the polygon have? Classify the polygon.
- b. What is the sum of the measures of the interior angles of the polygon?
- c. What is the sum of the measures of the exterior angles of the polygon?



39. **Softball** A home plate marker for a softball field is a pentagon, as shown. Three of the interior angles of the pentagon are right angles and the remaining two interior angles are congruent. What is the value of x ?



40. **Stained Glass Window** Part of a stained-glass window is a regular octagon, as shown. Find the measure of an interior angle of the regular octagon. Then find the measure of an exterior angle.

