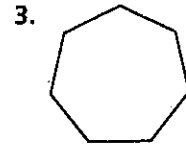
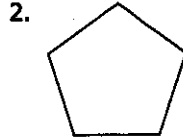
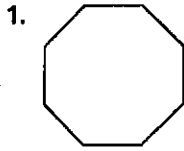


5.1 Practice

Form G

The Polygon Angle-Sum Theorems

Find the sum of the angle measures of each polygon.



4. 12-gon

5. 18-gon

6. 25-gon

7. 60-gon

8. 102-gon

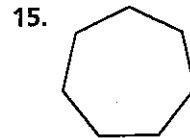
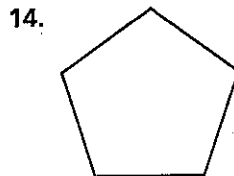
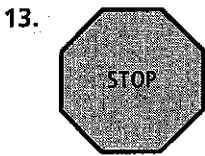
9. 17-gon

10. 36-gon

11. 90-gon

12. 11-gon

Find the measure of one angle in each regular polygon. Round to the nearest tenth if necessary.



16. regular 15-gon

17. regular 11-gon

18. regular 13-gon

19. regular 24-gon

20. regular 360-gon

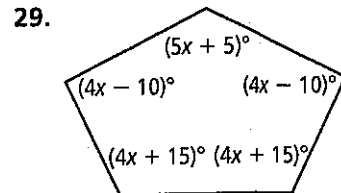
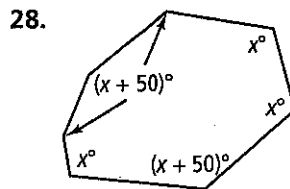
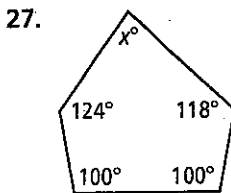
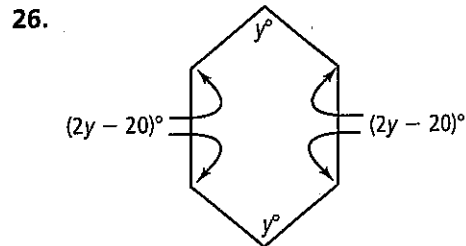
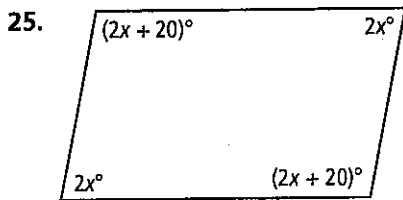
21. regular 18-gon

22. regular 36-gon

23. regular 72-gon

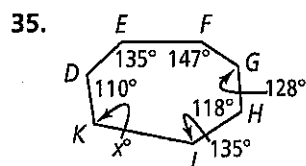
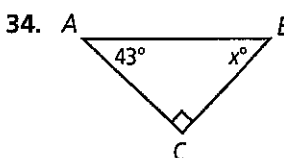
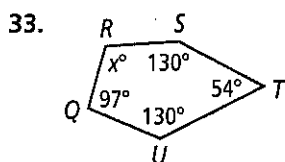
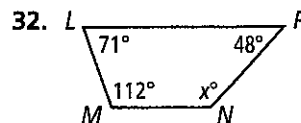
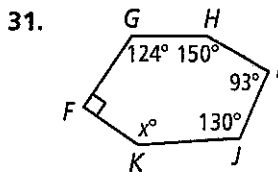
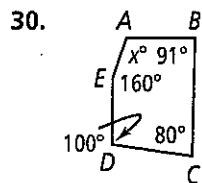
24. regular 144-gon

Algebra Find the missing angle measures.



| | | | | | | | | | |
|------|------|--------|-----|--------|------|------|-------|--------|-----|
| 4140 | 100 | 152.3 | 108 | 18,000 | 140 | 135 | 150 | 10,400 | 90 |
| 2700 | 100 | 900 | 80 | 175 | 170 | 100 | 177.5 | 115 | 160 |
| 98 | 1620 | 140 | 80 | 147.3 | 100 | 2880 | 80 | 128.6 | 130 |
| 160 | 165 | 140 | 540 | 140 | 1080 | 150 | 150 | 115 | ☺ |
| 1800 | 156 | 15,840 | 90 | 100 | 150 | 80 | 6120 | 179 | ☺ |

Algebra Find the missing angle measures.



Find the measure of an exterior angle of each regular polygon. Round to the nearest tenth if necessary.

36. decagon

37. 16-gon

38. hexagon

39. 20-gon

40. 72-gon

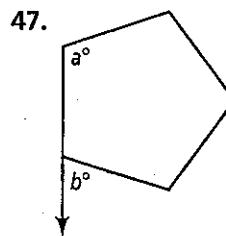
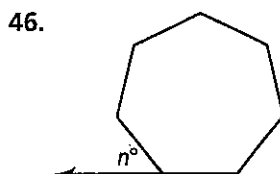
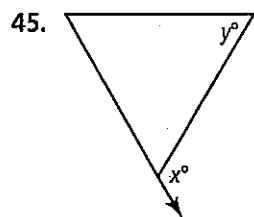
41. square

42. 15-gon

43. 25-gon

44. 80-gon

Find the values of the variables for each regular polygon. Round to the nearest tenth if necessary.



48. Reasoning Can a quadrilateral have no obtuse angles? Explain.

The measure of an exterior angle of a regular polygon is given. Find the measure of an interior angle. Then find the number of sides.

49. 12

50. 6

51. 45

52. 40

53. 24

54. 18

55. 9

56. 14.4

57. 7.2

Answers Scrambled © (Check #48 with Ms. Walczak)

| | | | | | | | | | |
|-----|-----|-------|----|-------|------|-----|-----|------|---|
| 135 | 174 | 36 | 30 | 129 | 156 | 171 | 120 | 24 | 8 |
| 140 | 109 | 162 | 72 | 172.8 | 60 | 5 | 40 | 90 | ☺ |
| 127 | 133 | 60 | 25 | 18 | 108 | 168 | 9 | 4.5 | ☺ |
| 50 | 20 | 165.6 | 47 | 15 | 14.4 | 129 | 60 | 22.5 | ☺ |