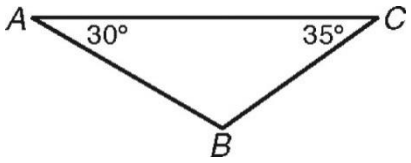
LESSON 7-1

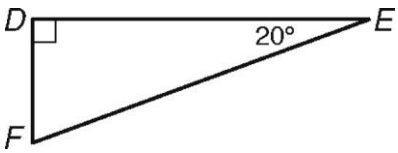
# Interior and Exterior Angles

***Practice and Problem Solving: A/B***

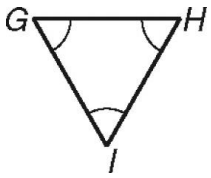
**Find the measure of each angle.**

1. 

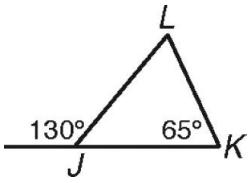

m∠*B* = _____°

2. 

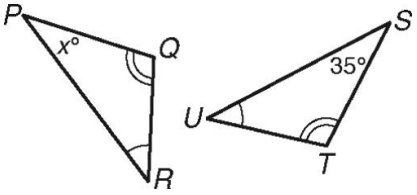

m∠*F* = _____°

3. 

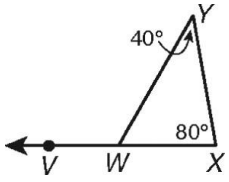

m∠*G* = _____°

4. 


m∠*L* = _____°

5. 


m∠*P* = _____°

6. 


m∠*VWY* = _____°

**Use your knowledge of angle relationships to answer questions 7–10.**

7. The sum of the angle measures of a quadrilateral is _____°.

8. The acute angles of a _____ triangle are complementary.

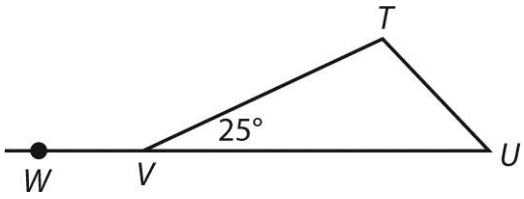
9. The measure of an _____ angle of a triangle is equal to the sum__ of the measures of its remote interior angles.

10. The angle measures of a triangle are *x*, 3*x*, and 5*x*. Tell the measure of each angle. _____°, _____°, _____°

**Use triangle *TUV* to answer Problems 11-13.**

11. Angle *TVW* is an exterior angle of triangle *TUV*.

What is its measure? _____°

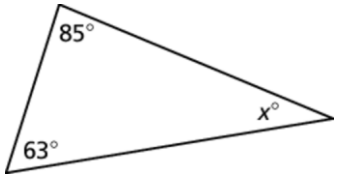



12. With respect to angle *TVW,* angles *T* and *U* are remote _____ angles.

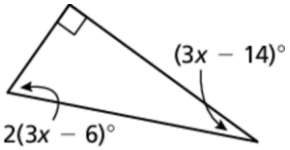
13. What is the sum of the measures of angles *T* and *U*? _____°

**In Exercises 14-17, find the value of *x*.**

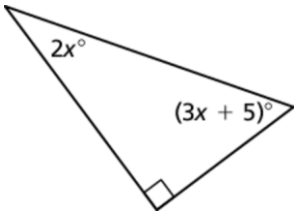
**14.**



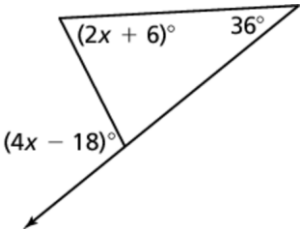

**15.**



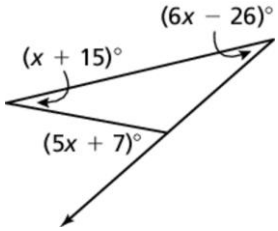

**16.**



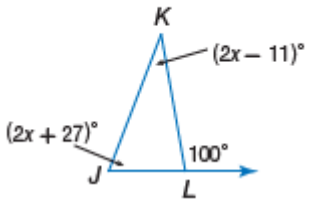

**17.**



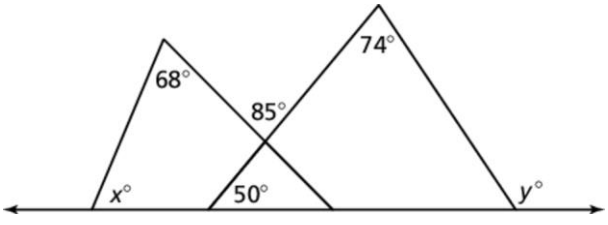

**18.**




**19.** $m\angle JKL$




**20.** In the figure, solve for *x* and *y*.



**Find the sum of the interior angle measures of each given polygon.**

**22.**

**23.**

**24.**

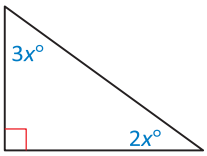
**25.** 12-gon

**26.** 18-gon

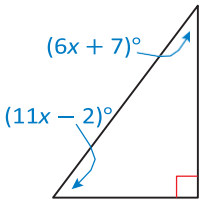
**27.** 25-gon

**Find the measure of each acute angle.**

28.




29.




**Find the measure of each acute angle in the right triangle.**

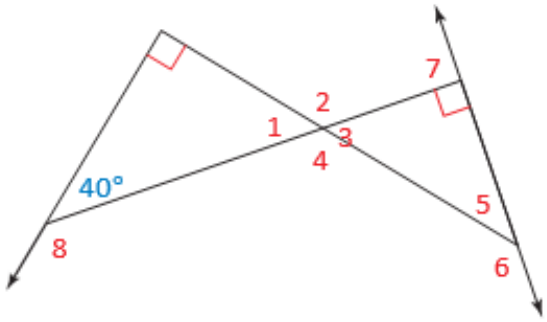
30. The measure of one acute angle is 5 times the measure of the other acute angle.

31. The measure of one acute angle is 8 times the measure of the other acute angle.

32. The measure of one acute angle is 3 times the sum of the measure of the other acute angle and 8.

33. The measure of one acute angle is twice the difference of the measure of the other acute angle and 12.

**Find the measure of the numbered angle.**




**36.** ∠1

37. ∠2

38. ∠3

39. ∠4

40. ∠5

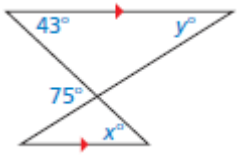
41. ∠6

42. ∠7

43. ∠8

**Find the values of *x* and *y*.**

44.




45.