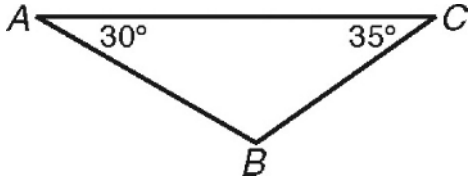
Name _____ Date _____ Class_____

LESSON 7-1

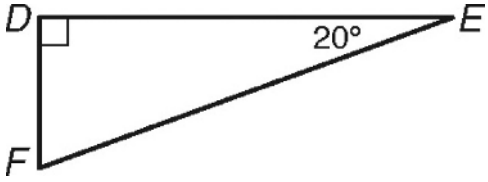
Interior and Exterior Angles

Practice and Problem Solving: A/B

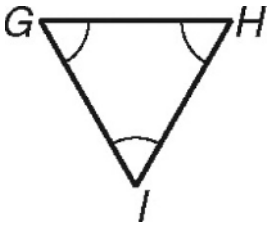
Find the measure of each angle.

1. 

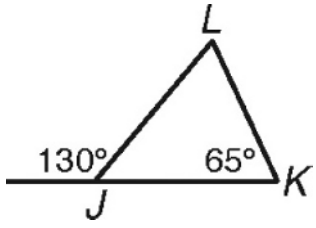
m∠*B* = _____°

2. 

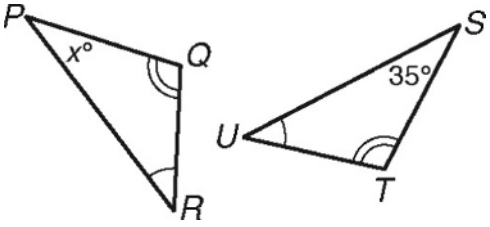
m∠*F* = _____°

3. 

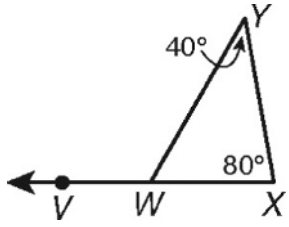
m∠*G* = _____°

4. 

m∠*L* = _____°

5. 

m∠*P* = _____°

6. 

m∠*VWY* = _____°

Use your knowledge of angle relationships to answer questions 7–12.

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 *a*, 3*a*, and 5*a*. Tell the measure of each angle. _____°, _____°, _____°

11. You know that one of the exterior angles of an isosceles triangle is 140°. The angle measures of the triangle could be _____°-_____°-_____° or _____°-_____°-_____°.

MODULE 7 Properties of Triangles

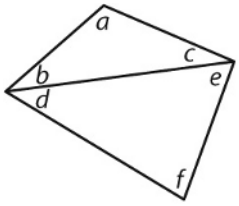
LESSON 7-1

Practice and Problem Solving: A/B

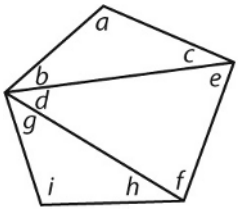
1. 115°
2. 70°
3. 60°
4. 65°
5. 35°
6. 120°
7. 360°
8. right
9. exterior
10. 20, 60, 100
11. 40, 40, 100 or 40, 70, 70

Practice and Problem Solving: C

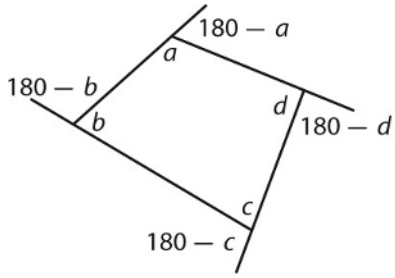
1. Quadrilateral:
   $a + b + c = 180$; $d + e + f = 180$;
   Sum of interior angles of quadrilateral = $a + b + c + d + e + f = (2)180 = 360$



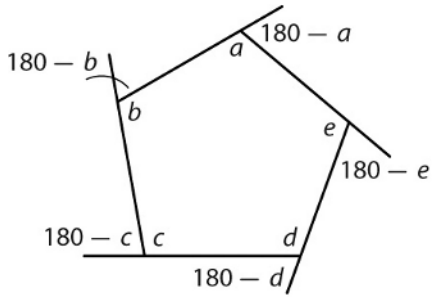
   Pentagon:
   $a + b + c = 180$; $d + e + f = 180$;
   $g + h + i = 180$; Sum of interior angles of pentagon =
   $a + b + c + d + e + f +$
   $g + h + i = 3(180) = 540$



2. Quadrilateral:
   Sum of interior angles of quadrilateral = $a + b + c + d = 2(180)$;
   Sum of exterior angles of quadrilateral = $(180 - a) + (180 - b) + (180 - c) + (180 - d) = 4(180) - (a + b + c + d) = 4(180) - 2(180) = 2(180) = 360$



   Pentagon:
   Sum of interior angles of pentagon = $a + b + c + d + e = 3(180)$;
   Sum of exterior angles of pentagon = $(180 - a) + (180 - b) + (180 - c) + (180 - d) + (180 - e) = 5(180) - (a + b + c + d + e) = 5(180) - 3(180) = 2(180) = 360$



3. Hexagon:
   Sum of interior angles = 4(180) = 720;
   Sum of exterior angles = $6(180) - 4(180) = 360$
4. 35°