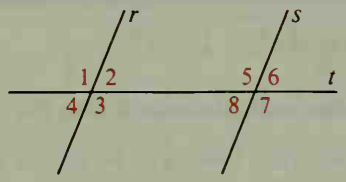
6. Triangles are classified (page 93) by the lengths of their sides and by the measures of their angles. In any $\triangle ABC$, $m\angle A + m\angle B + m\angle C = 180$.
7. The measure of an exterior angle of a triangle equals the sum of the measures of the two remote interior angles.
8. The sum of the measures of the angles of a convex polygon with n sides is $(n - 2)180$. The sum of the measures of the exterior angles, one angle at each vertex, is 360.
9. Polygons that are both equiangular and equilateral are regular polygons.
10. Inductive reasoning is the process of observing individual cases and then reaching a general conclusion suggested by them. The conclusion is probably, but not necessarily, true.

Chapter Review

3–1

1. $\angle 5$ and $\angle$ ___?___ are same-side interior angles.
2. $\angle 5$ and $\angle 1$ are ___?___ angles.
3. $\angle 5$ and $\angle 3$ are ___?___ angles.
4. Line j, not shown, does not intersect line r. Must lines r and j be parallel?



Exs. 1-7

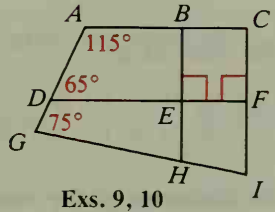
In the diagram above, $r \parallel s$.

3–2

5. If $m\angle 1 = 105$, then $m\angle 5 =$ ___?___ and $m\angle 7 =$ ___?___.
6. Solve for x: $m\angle 2 = 70$ and $m\angle 8 = 6x - 2$
7. Solve for y: $m\angle 3 = 8y - 40$ and $m\angle 8 = 2y + 20$
8. Lines a, b, and c are coplanar, $a \parallel b$, and $a \perp c$. What can you conclude? Explain.

3–3

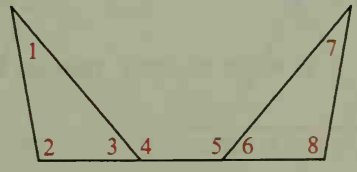
9. Which line is parallel to $\overleftrightarrow{AB}$? Why?
10. Name a pair of parallel lines other than the pair in Exercise 9. Why must they be parallel?
11. Name five ways to prove two lines parallel.



Exs. 9, 10

3–4

12. If x and $2x - 15$ represent the measures of the acute angles of a right triangle, find the value of x.
13. $m\angle 6 + m\angle 7 + m\angle 8 =$ ___?___
14. If $m\angle 1 = 30$ and $m\angle 4 = 130$, then $m\angle 2 =$ ___?___.
15. If $\angle 4 \cong \angle 5$ and $\angle 1 \cong \angle 7$, name two other pairs of congruent angles and give a reason for each answer.



Exs. 13-15