

After reading the lesson, but before attempting any of the exercises, ask yourself, “What did I just read?” Say the main words and ideas aloud to yourself or write down the ideas in your own words.

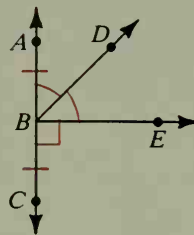
## Diagrams

It is important to be able to read a diagram and to draw a diagram from given information. Look carefully for all the information given by a diagram, but be sure you don't read more into a diagram than is actually there. For example, don't assume that two segments are the same length just because they *look* that way; if the segments are the same length, they will be marked to show it. Other suggestions about reading and drawing diagrams are given on pages 19, 61, and 140.

## Exercises, Tests, and Reviews

Each lesson is followed by Classroom and Written Exercises. Self-Tests are mid-chapter progress tests. At the end of each chapter are other checks of your understanding and mastery: the Chapter Review and the Chapter Test. There are lesson numbers in the margin of the Chapter Review to indicate which lesson a group of exercises covers. Each chapter also has a Cumulative Review of the material covered through that chapter. And, at the end of the book, there are multiple-choice examinations for each chapter.

Other features you will find helpful are the Mixed Review Exercises and the Algebra Reviews, which review material you will need in the next lesson or chapter. Even-numbered chapters have multiple-choice tests, called Preparing for College Entrance Exams, with questions similar to those in some college entrance tests. There are also Chapter Summaries (at the end of each chapter), the list of symbols (page xi), the Glossary, the Index, and lists of postulates, theorems, and constructions (at the back of the book). Answers for all the Mixed Review Exercises, Self-Tests, and Preparing for College Entrance Exams, and for selected Written Exercises, Chapter Review Exercises, and Cumulative Review Exercises are also at the back of the book.



Inequalities in Geometry 239

### Cumulative Review: Chapters 1–6

- An angle and its complement have the measures  $x + 38$  and  $2x - 5$ . Find the measure of the angle.
- Find the sum of the measures of the interior angles of a pentagon.
- Can the given information be used to prove the triangles congruent? If so, which congruence postulate or theorem would you use?
 

a. Given  $\overline{PC}$  and  $\overline{AL}$  bisect each other

b. Given  $\angle P \cong \angle C$ ,  $L$  is the midpoint of  $\overline{PC}$

c. Given  $\overline{PA} \perp \overline{LC}$

d. Given  $\overline{PA} \perp \overline{AL}$ ,  $\overline{LC} \perp \overline{AL}$ ,  $\overline{PL} \cong \overline{LC}$

Similar Polygons 279

### Chapter Test

- Two sides of a rectangle have the lengths 20 and 32. Find, in simplest form, the ratio of:
  - the length of the shorter side to the length of the longer side
  - the perimeter to the length of the longer side

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### Chapter Review

In Exercises 1–4 answer on the basis of what appears to be true.

- How many blue points are 1 cm from point O?
- How many red points are 1 cm from O?
- How many red points are 2 cm from O?
- Each red point is said to be  $\frac{1}{2}$  cm from points A and B.

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### Self-Test 1

Name the point that appears to satisfy the condition.

- Equidistant from R and S
- Equidistant from S and T
- Equidistant from R and T

Classify each statement as true or false.

- Plane Y and  $\overleftrightarrow{PQ}$  intersect in point L.
- Points J, K, L, and N are coplanar.
- Points J, L, and Q are collinear.
- Draw a vertical plane Z intersecting a horizontal line l in a point T.

### Algebra Review: Linear Equations

Find the value of the variable.

1. $c + 5 = 12$	2. $8 + c = 13$	3. $c - 5 = 12$
4. $7 - z = 13$	5. $15 - z = 0$	6. $4z = 28$
7. $3x = 15$	8. $7x = -35$	9. $-5x = -5$
10. $\frac{1}{2}a = 2$	11. $\frac{1}{3}a = 9$	12. $\frac{1}{4}a = -20$
13. $-2b = 6$	14. $-3b = -9$	15. $-9b = 2$
16. $42 = 6d$	17. $5 = 10d$	18. $-16 = -4d$
19. $12 = \frac{e}{2}$	20. $-9 = \frac{e}{3}$	21. $5 = \frac{e}{3}$
22. $2p + 5 = 13$	23. $3p - 5 = 13$	24. $4p + 2 = 22$
25. $6 = 4r - 2$	26. $4r = 10$	27. $4r = 10$