Written Exercises

A

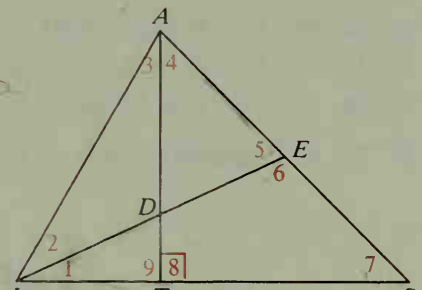
1. Name the vertex and the sides of $\angle 5$.

2. Name all angles adjacent to $\angle ADE$.

State another name for the angle.

3. $\angle 1$ **4.** $\angle 3$ **5.** $\angle 5$

6. $\angle ALD$ **7.** $\angle AST$ **8.** $\angle LES$



Exs. 1–18

State whether the angle appears to be acute, right, obtuse, or straight.

9. $\angle 2$ **10.** $\angle LAS$ **11.** $\angle ATL$

12. $\angle S$ **13.** $\angle LTS$ **14.** $\angle EDT$

Complete.

15. $m\angle 3 + m\angle 4 = m\angle$ ___?___ **16.** $m\angle ALS - m\angle 2 = m\angle$ ___?___

17. If $m\angle 1 = m\angle 2$, then ___?___ bisects ___?___. **18.** $m\angle LDA + m\angle ADE =$ ___?___

Without measuring, sketch each angle. Then use a protractor to check your accuracy.

19. 90° angle **20.** 45° angle **21.** 150° angle **22.** 10° angle

Draw a line, $\overleftrightarrow{AB}$. Choose a point O between A and B. Use a protractor to investigate the following questions.

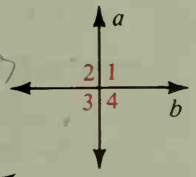
23. In the plane represented by your paper, how many lines can you draw through O that will form a 30° angle with $\overrightarrow{OB}$?

24. In the plane represented by your paper, how many lines can you draw through O that will form a 90° angle with $\overrightarrow{OB}$?

B

25. Using a ruler, draw a large triangle. Then use a protractor to find the approximate measure of each angle and compute the sum of the three measures. Repeat this exercise for a triangle with a different shape. Did you get the same result?

26. Find $m\angle 2$, $m\angle 3$, and $m\angle 4$ when the measure of $\angle 1$ is:
a. 90 **b.** 93



27. Express $m\angle 2$, $m\angle 3$, and $m\angle 4$ in terms of t when $m\angle 1 = t$.

28. A careless person wrote, using the figure shown,

$$m\angle AOB + m\angle BOC = m\angle AOC.$$

What part of the Angle Addition Postulate did that person overlook?