# 5  CHAPTER TEST

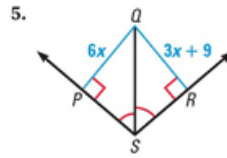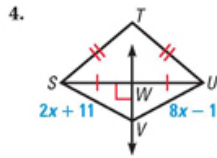**Two midsegments of △ABC are $\overline{DE}$ and $\overline{DF}$.**

1. Find DB.                    2. Find DF.
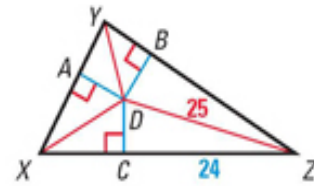
3. What can you conclude about $\overline{EF}$?
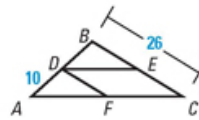
**Find the value of x. Explain your reasoning.**

4.                5.                6.
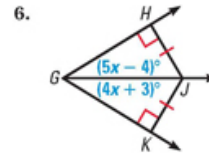
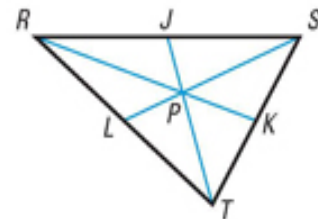7. In Exercise 4, is point T on the perpendicular bisector of $\overline{SU}$? Explain.

8. In the diagram at the right, the angle bisectors of △XYZ meet at point D. Find DB.

**In the diagram at the right, P is the centroid of △RST.**

9. If LS = 36, find PL and PS.

10. If TP = 20, find TJ and PJ.

11. If JR = 25, find JS and RS.

12. Is it possible to construct a triangle with side lengths 9, 12, and 22? If not, *explain* why not.

13. In △ABC, AB = 36, BC = 18, and AC = 22. Sketch and label the triangle. List the angles in order from smallest to largest.

**In the diagram for Exercises 14 and 15, JL = MK.**

14. If $m\angle JKM > m\angle LJK$, which is longer, $\overline{LK}$ or $\overline{MJ}$? Explain.

15. If MJ < LK, which is larger, $\angle LJK$ or $\angle JKM$? Explain.

16. Write a temporary assumption you could make to prove the conclusion indirectly: *If RS + ST ≠ 12 and ST = 5, then RS ≠ 7.*
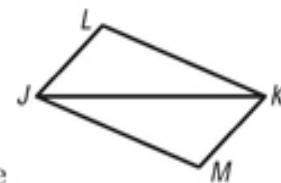
**Use the diagram in Exercises 17 and 18.**

17. *Describe* the range of possible distances from the beach to the movie theater.

18. A market is the same distance from your house, the movie theater, and the beach. Copy the diagram and locate the market.

1. 10

2. 13

3. EF is a midsegment.

4. 2

5. 3

6. 7

7. Yes; Triangle STU is isosceles.

8. 7

9. 12, 24

10. 30, 10

11. 25, 50

12. No; the sum of the lengths of any two sides of a triangle must be greater than the length of the third side.

13. ∠A, ∠B, ∠C

14. MJ

15. <LJK

16. Assume that RS = 7\

17. 2 mi < d < 16 mi

18.