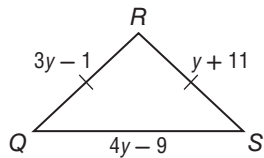


Mid-Chapter Quiz

Lessons 4-1 through 4-4

1. **COORDINATE GEOMETRY** Classify $\triangle ABC$ with vertices $A(-2, -1)$, $B(-1, 3)$, and $C(2, 0)$ as *scalene*, *equilateral*, or *isosceles*. (Lesson 4-1)

2. **MULTIPLE CHOICE** Which of the following are the measures of the sides of isosceles triangle QRS ? (Lesson 4-1)

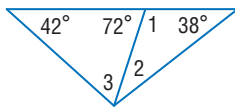


- A 17, 17, 15 C 14, 15, 14
B 15, 15, 16 D 14, 14, 16

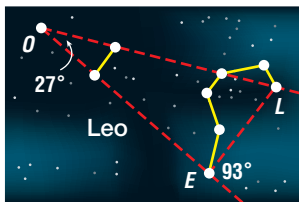
3. **ALGEBRA** Find x and the length of each side if $\triangle WXY$ is an equilateral triangle with sides $\overline{WX} = 6x - 12$, $\overline{XY} = 2x + 10$, and $\overline{WY} = 4x - 1$. (Lesson 4-1)

Find the measure of each angle indicated. (Lesson 4-2)

4. $m\angle 1$
5. $m\angle 2$
6. $m\angle 3$

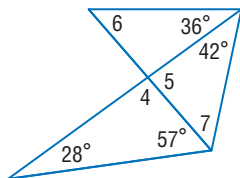


7. **ASTRONOMY** Leo is a constellation that represents a lion. Three of the brighter stars in the constellation form $\triangle LEO$. If the angles have measures as shown in the figure, find $m\angle OLE$. (Lesson 4-2)

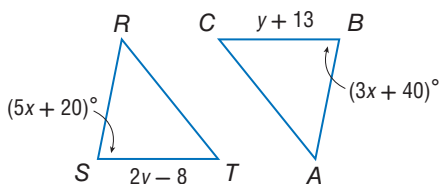


Find the measure of each numbered angle. (Lesson 4-2)

8. $m\angle 4$
9. $m\angle 5$
10. $m\angle 6$
11. $m\angle 7$

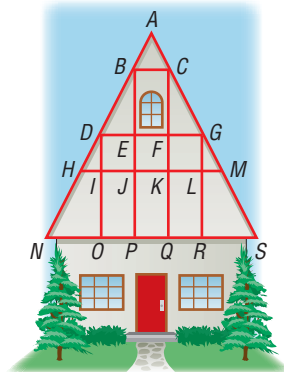


In the diagram, $\triangle RST \cong \triangle ABC$. (Lesson 4-3)



12. Find x . 13. Find y .

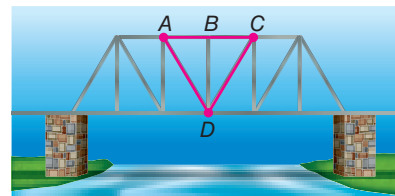
14. **ARCHITECTURE** The diagram shows an A-frame house with various points labeled. Assume that segments and angles that appear to be congruent in the diagram are congruent. Indicate which triangles are congruent. (Lesson 4-3)



15. **MULTIPLE CHOICE** Determine which statement is true given that $\triangle CBX \cong \triangle SML$. (Lesson 4-3)

- F $\overline{MO} \cong \overline{SL}$ H $\angle X \cong \angle S$
G $\overline{XC} \cong \overline{ML}$ J $\angle XCB \cong \angle LSM$

16. **BRIDGES** A bridge truss is shown in the diagram below, where $\overline{AC} \perp \overline{BD}$ and B is the midpoint of \overline{AC} . What method can be used to prove that $\triangle ABD \cong \triangle CBD$? (Lesson 4-4)



Determine whether $\triangle PQR \cong \triangle XYZ$. (Lesson 4-4)

17. $P(3, -5)$, $Q(11, 0)$, $R(1, 6)$, $X(5, 1)$, $Y(13, 6)$, $Z(3, 12)$
18. $P(-3, -3)$, $Q(-5, 1)$, $R(-2, 6)$, $X(2, -6)$, $Y(3, 3)$, $Z(5, -1)$
19. $P(8, 1)$, $Q(-7, -15)$, $R(9, -6)$, $X(5, 11)$, $Y(-10, -5)$, $Z(6, 4)$
20. **Write a two-column proof.** (Lesson 4-4)

Given: $\triangle LMN$ is isos. with $\overline{LM} \cong \overline{NM}$, and \overline{MO} bisects $\angle LMN$.

Prove: $\triangle MLO \cong \triangle MNO$

