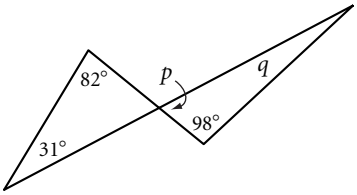
Lesson 4.1 • Triangle Sum Conjecture

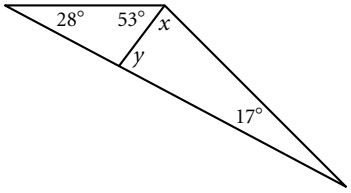
Name _____ **Period** _____ **Date** _____

In Exercises 1–9, determine the angle measures.

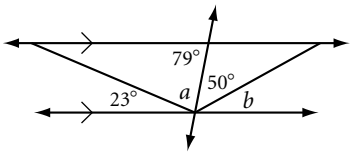
1. $p =$ _____, $q =$ _____



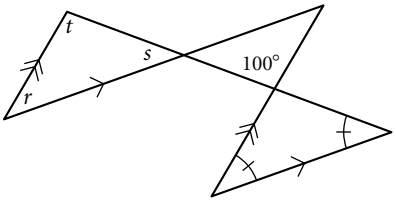
2. $x =$ _____, $y =$ _____



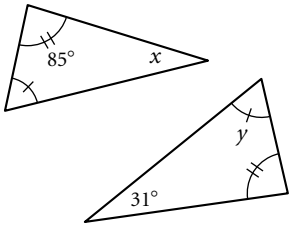
3. $a =$ _____, $b =$ _____



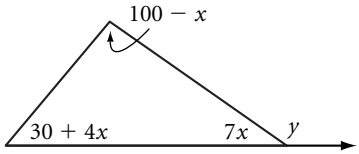
4. $r =$ _____, $s =$ _____, $t =$ _____



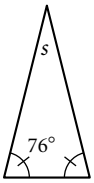
5. $x =$ _____, $y =$ _____



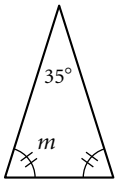
6. $y =$ _____



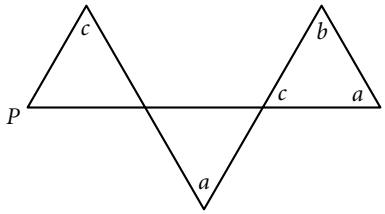
7. $s =$ _____



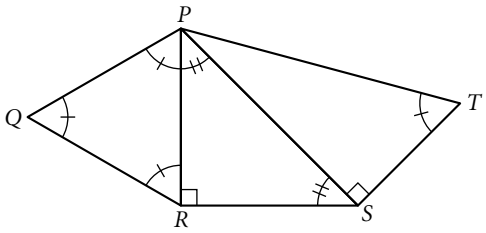
8. $m =$ _____



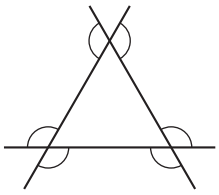
9. $m\angle P =$ _____



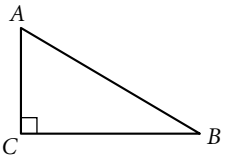
10. Find the measure of $\angle QPT$.



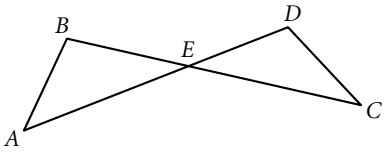
11. Find the sum of the measures of the marked angles.



12. Use the diagram to explain why $\angle A$ and $\angle B$ are complementary.



13. Use the diagram to explain why $m\angle A + m\angle B = m\angle C + m\angle D$.

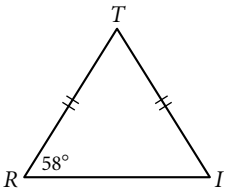


Lesson 4.2 • Properties of Isosceles Triangles

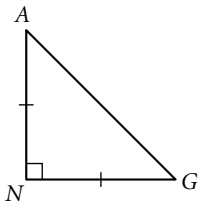
Name _____ **Period** _____ **Date** _____

In Exercises 1–3, find the angle measures.

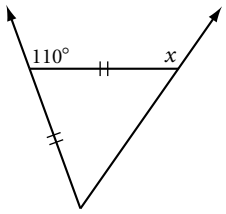
1. $m\angle T =$ _____



2. $m\angle G =$ _____

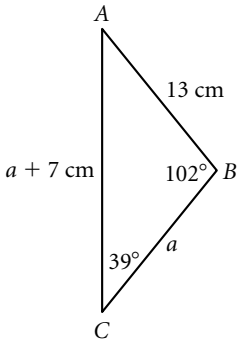


3. $x =$ _____

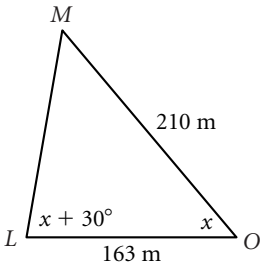


In Exercises 4–6, find the measures.

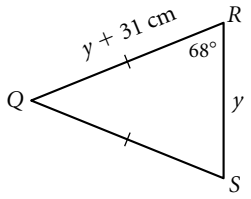
4. $m\angle A =$ _____, perimeter of $\triangle ABC =$ _____



5. The perimeter of $\triangle LMO$ is 536 m. $LM =$ _____, $m\angle M =$ _____



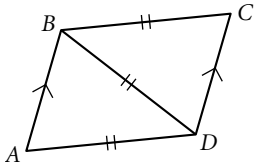
6. The perimeter of $\triangle QRS$ is 344 cm. $m\angle Q =$ _____, $QR =$ _____



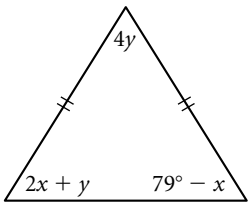
7. a. Name the angle(s) congruent to $\angle DAB$.

b. Name the angle(s) congruent to $\angle ADB$.

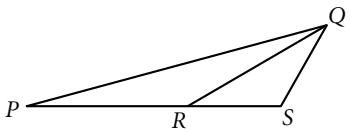
c. What can you conclude about $\overline{AD}$ and $\overline{BC}$? Why?



8. $x =$ _____, $y =$ _____



9. $PR = QR$ and $QS = RS$. If $m\angle RSQ = 120°$, what is $m\angle QPR$?



10. Use the diagram to explain why $\triangle PQR$ is isosceles.