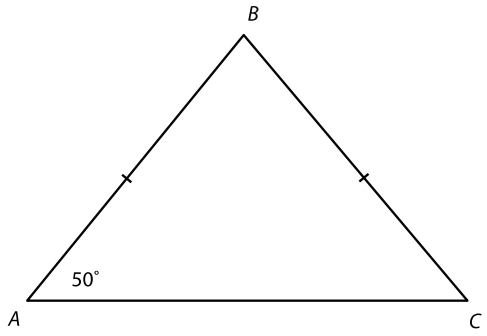
Name: **Date:**

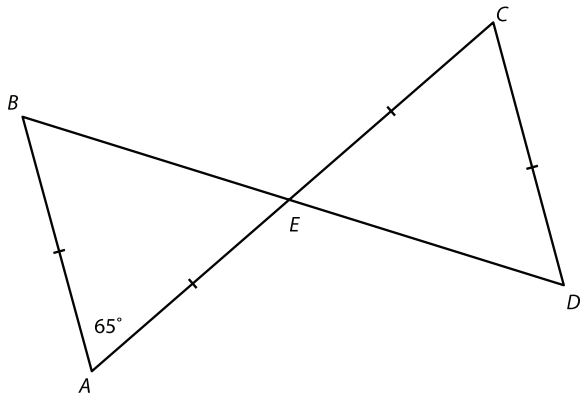
Practice: Proving Theorems About Isosceles Triangles A

Use what you know about isosceles triangles to find each angle measure.

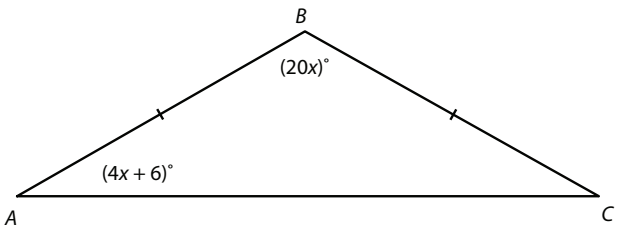
1. $m\angle B$ and $m\angle C$



2. $m\angle B$, $m\angle C$, and $m\angle D$

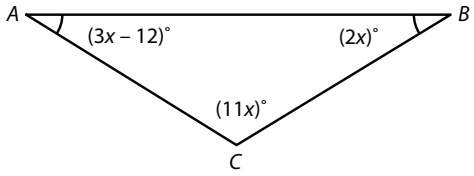


3. $m\angle A$, $m\angle B$, and $m\angle C$



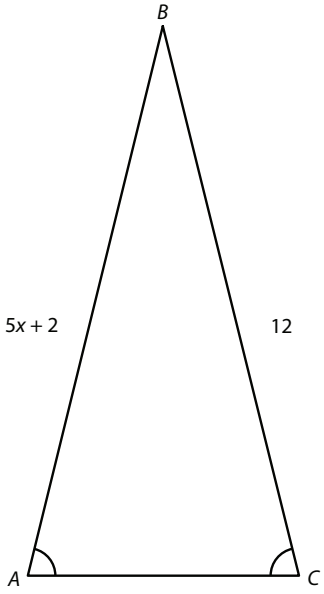
continued

4. $m\angle A$, $m\angle B$, and $m\angle C$



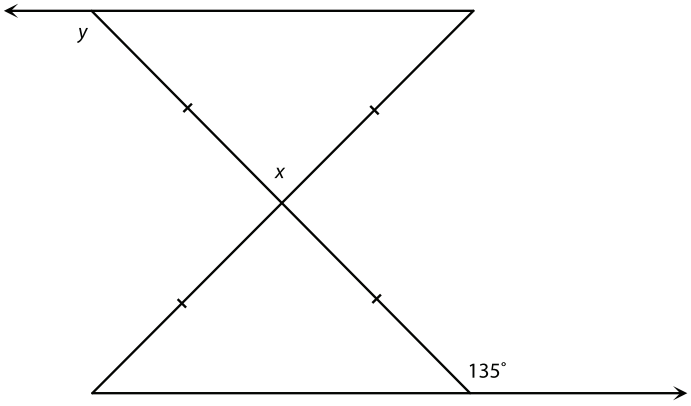
Find each value using the given information.

5. x

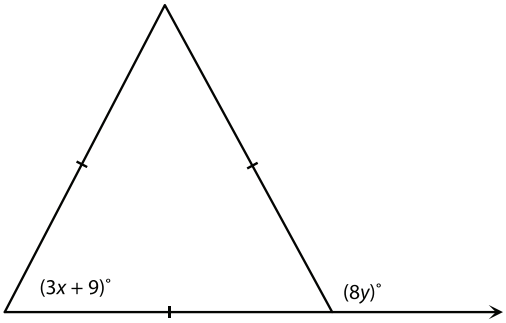


continued

6. $m\angle x$ and $m\angle y$



7. x and y



For problems 8 and 9, use the given vertices to determine whether $\triangle ABC$ is an isosceles triangle. If it is isosceles, name a pair of congruent angles.

8. A (0, 0), B (–8, 0), C (–4, –6)

9. A (1, 1), B (4, 4), C (6, –2)

continued

Name: **Date:**

Use your knowledge of triangle theorems to complete problem 10.

10. The converse of the Isosceles Triangle Theorem states that if two angles of a triangle are congruent, then the sides opposite those angles are congruent. Write a two-column proof of this statement.