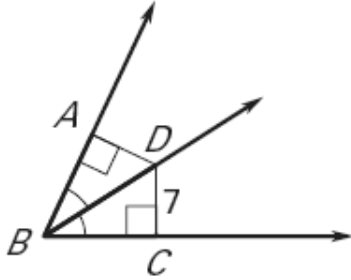


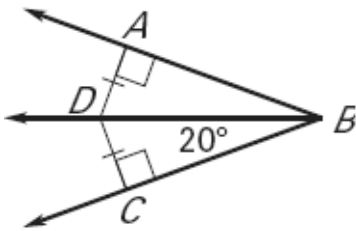
Assignment 43 LESSON 5.3

Use the information in the diagram to find the measure.

1. Find AD .

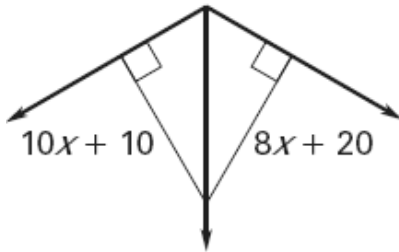


2. Find $m\angle DBA$.

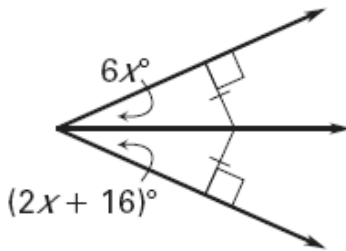


Find the value of x .

- 3.

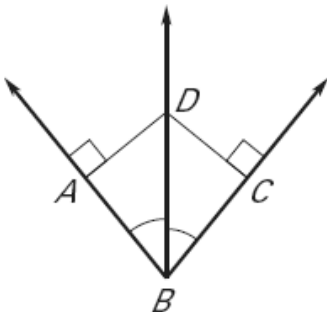


- 4.

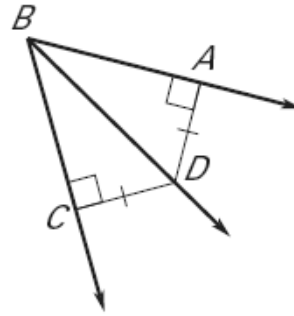


Is $DA = DC$? Explain.

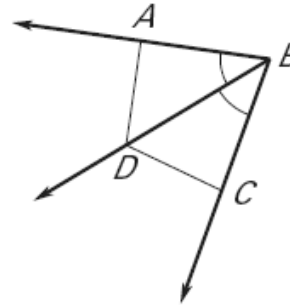
- 5.



- 6.

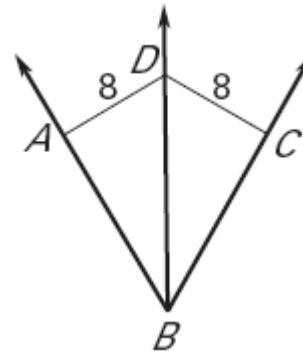


- 7.

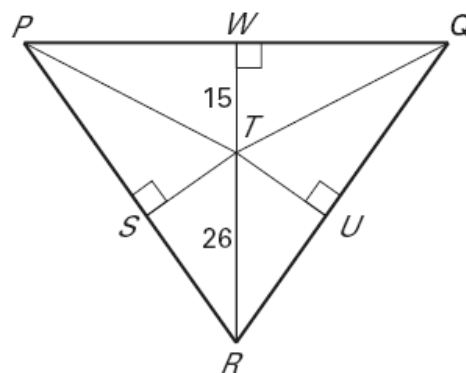


Can you conclude that \overrightarrow{BD} bisects $\angle ABC$? Explain.

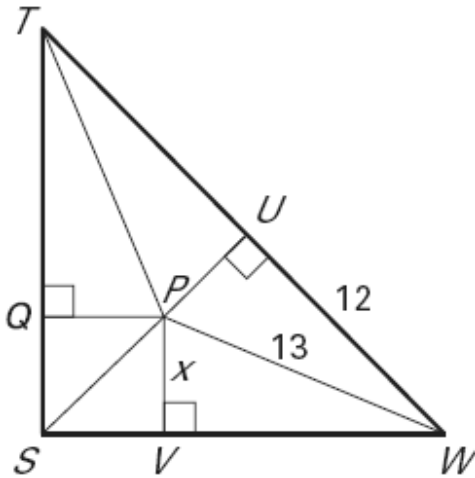
- 8.



9. Point T is the incenter of $\triangle PQR$. Find ST .



10. Find the value of x that makes P the incenter of $\triangle STW$



11. **Bird Bath** Your neighbor is moving a new bird bath to his triangular back yard. He wants the bird bath to be the same distance from each edge of the yard. Where should your neighbor place the bird bath? *Explain.*

12. **Landscaping** You are planting a tree at the incenter of your triangular front yard. Use the diagram to determine how far the tree is from the house.

