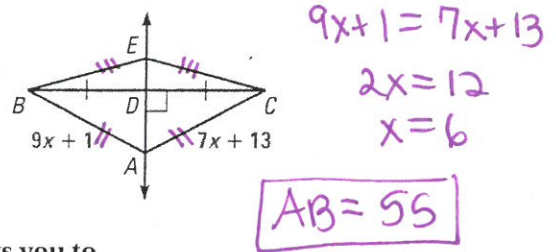
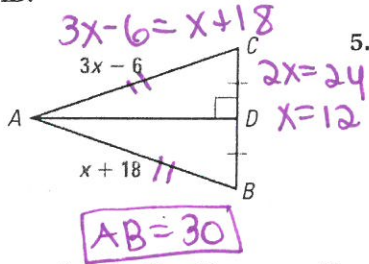
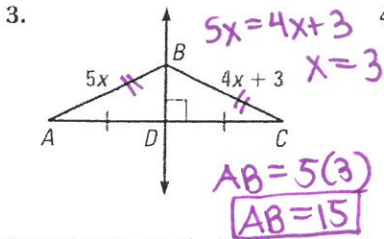
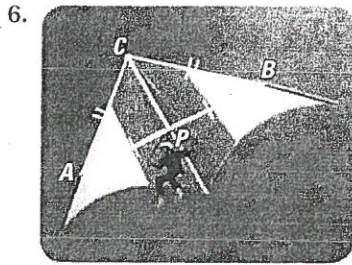


2. ★ **WRITING** Consider \overline{AB} . How can you describe the set of all points in a plane that are equidistant from A and B? *perpendicular bisector of \overline{AB}*

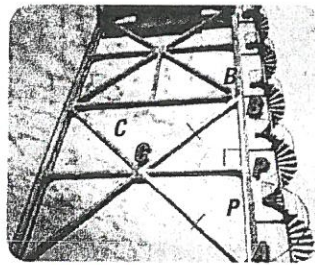
3. **ALGEBRA** Find the length of \overline{AB} .



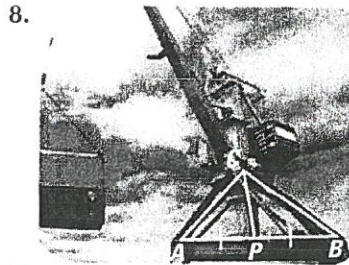
REASONING Tell whether the information in the diagram allows you to conclude that C is on the perpendicular bisector of \overline{AB} .



Yes because $CA = CB$
so C is equidistant from A and B.



Yes because $CA = CB$
so S is equidistant from A and B.

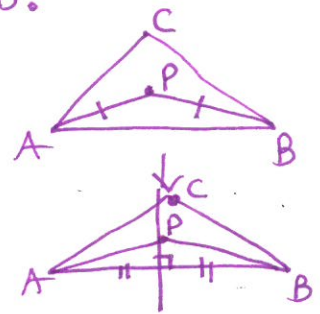


No. You only know that $AP = BP$.

9. ★ **MULTIPLE CHOICE** Point P is inside $\triangle ABC$ and is equidistant from points A and B. On which of the following segments must P be located?

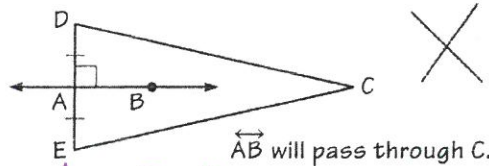
- (A) \overline{AB}
(C) The midsegment opposite \overline{AB}

- (B) The perpendicular bisector of \overline{AB}
(D) The perpendicular bisector of \overline{AC}



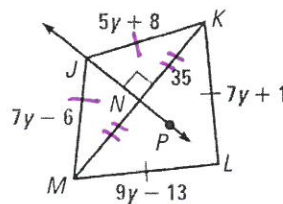
10. **ERROR ANALYSIS** Explain why the conclusion is not correct given the information in the diagram.

We only know that C is on the \perp bisector of \overline{DE} if $CD = CE$ but that was not given!!



PERPENDICULAR BISECTORS In Exercises 11–15, use the diagram. \overleftrightarrow{JN} is the perpendicular bisector of \overline{MK} .

11. Find NM. 35
12. Find JK. 43
13. Find KL. 50
14. Find ML. 50



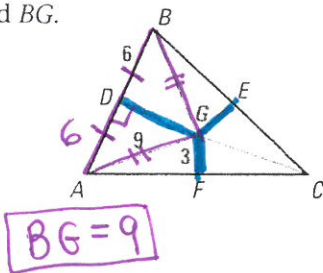
$7y + 1 = 9y - 13$
 $14 = 2y$
 $7 = y$

15. Is L on \overleftrightarrow{JP} ? Explain your reasoning.

Yes because $KL = ML$ so L is on the \perp bisector

USING CONCURRENCY In the diagram, the perpendicular bisectors of $\triangle ABC$ meet at point G and are shown in blue. Find the indicated measure.

16. Find BG.



17. Find GA.

