

6.1 Perpendicular & Angle Bisectors CYU

☑ Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

H Use when you could do it alone with a little help from teacher or peer

G Use when you completed the problem in a group

X Use when a question was attempted but wrong (get help)

N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Properties of Perpendicular Bisectors	1 - 4	5 - 8	
Properties of Angle Bisectors	9 - 11		
Writing Equations of Perpendicular Bisectors			12 - 15

Find the indicated measure. Explain your reasoning.

1. $GH = 4.6$

⊥ Bisector Thm

2. $QR = 1.3$

Converse ⊥ Bisector Thm

3. $AB = 15$

Converse ⊥ Bisector Thm

4. $UW = 55$

⊥ Bisector Thm

Tell whether the information in the diagram allows you to conclude that point P lies on the perpendicular bisector \overline{LM} . Explain your reasoning.

5.

yes, Converse ⊥ bisector thm

6.

NO, you need either $LN = MN$ or $LP = MP$.

7.

No, you need $\overleftrightarrow{PL} \perp \overleftrightarrow{ML}$

8.

yes, Converse ⊥ bisector Thm

Find the indicated measure. Explain your reasoning.

9. $m\angle ABD = 20^\circ$

Converse ⊥ Bisector Thm

10. $m\angle KJL = 28^\circ$

⊥ Bisector Thm

11. $FG = 16$

⊥ Bisector Thm

Write an equation of the perpendicular bisector of the segment with the given endpoints.

12. M(1, 5) & N(7, -1)

$$y = x - 2$$

13. Q(-2, 0) & R(6, 12)

$$y = -\frac{2}{3}x + \frac{22}{3}$$

14. U(-3, 4) & V(9, 8)

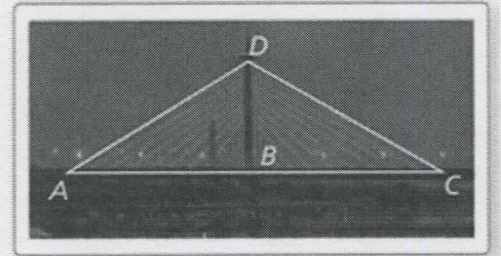
$$y = -3x + 15$$

15. Y(10, -7) & Z(-4, 1)

$$y = \frac{7}{4}x - \frac{33}{4}$$

16. **MODELING MATHEMATICS:** In the photo, the road is perpendicular to the support beam and $\overline{AB} \cong \overline{CB}$. Which theorem allows you to conclude that $\overline{AD} \cong \overline{CD}$?

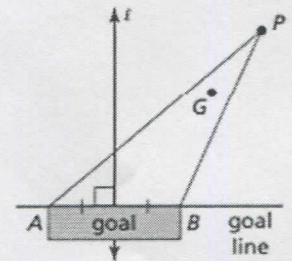
+ Bisector Thm



17. **MODELING WITH MATHEMATICS:** the diagram shows the position of the goalie and the puck during a hockey game. The goalie is at point G, and the puck is at point P.

a) What should be the relationship between \overrightarrow{PG} and $\angle APB$ to give the goalie equal distances to travel on each side of \overrightarrow{PG} ?

\overrightarrow{PG} should bisect $\angle APB$



b) How does $m\angle APB$ change as the puck gets closer to the goal? Does this change make it easier or more difficult for the goalie to defend the goal? Explain your reasoning.

$m\angle APB$ gets larger, more difficult, As the \angle increases, the goalie is farther away from each side of the \angle .

CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

●	●	●	●	●	●	●	
1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!

